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DEPARTMENT OF THE INTERIOR

BULLETIN

OF THE

UNITED STATES

GEOLOGICAL SURVEY

No. 115

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

278055

UNITED STATES GEOLOGICAL SURVEY
J. W. POWELL, DIRECTOR

A

GEOGRAPHIC DICTIONARY

OF

RHODE ISLAND

BY

HENRY GANNETT

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
U. S. GEOLOGICAL SURVEY,
DIVISION OF GEOGRAPHY,
Washington, D. C., January 15, 1894.

SIR: I have the honor to transmit herewith for publication a geographic dictionary of Rhode Island.

Very respectfully,

HENRY GANNETT,
Chief Topographer.

Hon. J. W. POWELL,
Director U. S. Geological Survey.

A GEOGRAPHIC DICTIONARY OF RHODE ISLAND.

By Henry Gannett.

The Geographic Dictionary of Rhode Island, which constitutes this bulletin, is designed to aid in finding any geographic feature upon the atlas sheets of that State published by the U. S. Geological Survey. It contains all the names given upon those sheets, and no other. Under each name is a brief statement showing the feature it designates and its location, and opposite to it is the name of the atlas sheet or sheets upon which it is to be found.

The atlas sheets upon which the State is represented are the result of a survey made at the joint expense of the U. S. Geological Survey and the State of Rhode Island. The scale upon which the sheets are published is 1:62500: that is, a distance of 62,500 inches upon the ground, or very nearly 1 mile, is represented by 1 inch upon the map. Relief, or variation of elevation, is represented by contour lines or lines of equal elevation above mean sea level, these contour lines being at vertical intervals of 20 feet; so that each successive contour indicates a level 20 feet higher than the one below it. Upon the map all water bodies, that is, bays, ponds, rivers, etc., are represented in blue; the contour lines representing the relief, together with the figures showing absolute elevations, are printed in brown; and the lettering and all lines indicating the works of man are printed in black.

The area of the State is represented upon 15 sheets, each sheet comprising 15 minutes of latitude by 15 minutes of longitude. Each sheet, therefore, includes about 17½ miles from north to south and about 13 miles from east to west. Of these sheets only 4 lie entirely or virtually within the State, the others including portions of the adjacent States of Massachusetts and Connecticut. The following is a list of the sheets, showing the names assigned to them and their limits in latitude and longitude:

Sheets.	Limits.			
	In latitude.		In longitude.	
	° ′	° ′	° ′	° ′
Franklin	42 00	to 42 15	71 15	to 71 30
Blackstone	42 00	42 15	71 30	71 45
Webster	42 00	42 15	71 45	72 00
Providence	41 45	42 00	71 15	71 30
Burrillville	41 45	42 00	71 30	71 45
Putnam	41 45	42 00	71 45	72 00
Fall River	41 30	41 45	71 00	71 15
Narragansett Bay	41 30	41 45	71 15	71 30
Kent	41 30	41 45	71 30	71 45
Moosup	41 30	41 45	71 45	72 00
Sakonnet	41 15	41 30	71 00	71 15
Newport	41 15	41 30	71 15	71 30
Charlestown	41 15	41 30	71 30	71 45
Stonington	41 15	41 30	71 45	72 00
Block Island	41 00	41 15	71 30	71 45

The spelling of the names conforms to the decisions of the U. S. Board of Geographic Names.

Rhode Island is one of the original thirteen States; it was the last to ratify the Constitution, which it did on May 29, 1790.

The boundary lines between Rhode Island on the one hand and Massachusetts and Connecticut on the other are extremely irregular, having originated with early colonial charters, and having been modified subsequently by conventions and agreements, so that it is impossible to describe them in any other way than by representing them upon a map or by a detailed statement of courses and distances.

The total area of the State is 1,250 square miles. Of this area 197 square miles are water surface, consisting of bays, ponds, rivers, etc., which, deducted from the total area, leaves 1,053 square miles of land surface.

The State is divided into five counties, having land areas as follows:

County.	Square miles.
Bristol	24.3
Kent	169.0
Newport	117.0
Providence	410.9
Washington	331.0

These counties are subdivided into towns and cities. There are in the State thirty-four towns and two cities. They are as follows:

- Bristol County:
  - Barrington.
  - Bristol.
  - Warren.
- Kent County:
  - Coventry.
  - East Greenwich.
  - West Greenwich.
  - Warwick.
- Newport County:
  - Jamestown.
  - Little Compton.
  - Middletown.
  - Newport City.
  - New Shoreham.
  - Portsmouth.
  - Tiverton.
- Providence County:
  - Burrillville.
  - Cranston.
  - Cumberland.
- Providence County—Continued.
  - East Providence.
  - Foster.
  - Glocester.
  - Johnston.
  - Lincoln.
  - North Providence.
  - North Smithfield.
  - Pawtucket.
  - Providence City.
  - Scituate.
  - Smithfield.
  - Woonsocket.
- Washington County:
  - Charlestown.
  - Exeter.
  - Hopkinton.
  - North Kingstown.
  - South Kingstown.
  - Richmond.
  - Westerly.

A GEOGRAPHIC DICTIONARY OF RHODE ISLAND.

	Names of sheets.
Absalona; hill in Glocester; altitude, 635 feet	Burrillville.
Adams; fort situated on a point at entrance of Newport Harbor	Newport.
Adams; point on shore of Warren River, in Barrington	Narragansett Bay.
Adamsville; village in southeast part of Little Compton	Fall River.
Albion; village in Lincoln, on Providence and Worcester R. R.	Providence.
Allendale; small village in North Providence	Providence.
Allen; harbor on Narragansett Bay, in North Kingstown	Narragansett Bay.
Allenton; village in North Kingstown	Narragansett Bay.
Allenville; village in Smithfield	Burrillville.
Almy; point projecting from northern part of Portsmouth into Sakonnet River	Fall River.
Almy; pond in south part of Newport	Newport.
Almy; reservoir in Johnston; altitude, 296 feet	Burrillville.
Andrews; hill on boundary between Warwick and East Greenwich; altitude, 380 feet	Kent.
Anthony; village in Coventry	Kent.
Anthony; point projecting from Tiverton into Sakonnet River.	Fall River.
Applehouse; hill in Cranston; altitude, 440 feet	Burrillville.
Apponaug; village and railroad station in Warwick, on New York, Providence and Boston R. R	Narragansett Bay.
Apponaug; river, or properly an inlet, in Narragansett Bay, in town of Warwick	Narragansett Bay.
Arcadia; village in northeast part of Richmond	Kent.
Arctic; village in Warwick	Kent.
Arkwright; village in Coventry	Kent.
Arnold Mill; village in Cumberland	Providence.
Arrow; swamp in southeastern part of Exeter	Kent.
Ashaway; village in southwest part of Hopkinton	Stonington.
Ashlandville; village in Scituate	Burrillville.
Ashton; village in Cumberland	Providence.
Ashville; pond in western part of Hopkinton; height, 169 feet.	Moosup.
Auburn; village in Cranston on Providence R. R	Providence.
Austin Hollow; shallow cove on west shore of Conanicut Island	Newport.
Babcock; pond (salt) in south part of Westerly	Stonington.
Bailey; hill in Richmond; altitude, 240 feet	Kent.
Baker; village on Warwick R. R., in town of Warwick	Narragansett Bay.
Bald; hill in West Greenwich; altitude, 630 feet	Kent.
Bald; hill in Exeter; altitude, 432 feet	Kent.
Bald; hill in Warwick; elevation, 220 feet	Narragansett Bay.
Bald; hill in Cranston; altitude, 501 feet	Burrillville.
Ball; point on east coast of Block Island	Block Island.
Bank; village in North Smithfield	Burrillville.
Barber; pond in northern part of South Kingstown	Kent.
Barber Height; hill in southeast part of North Kingston; elevation, 200 feet	Narragansett Bay.

	Names of sheets.
Barberville; village in the northeastern part of Hopkinton	Kent.
Barden; reservoir in eastern part of Exeter; elevation, 345 feet.	Burrillville.
Barrington; river; branch of Warren River in town of Barrington.	Providence. Narragansett Bay.
Barrington; town in Bristol County, on shore of Narragansett Bay; area, 9.3 square miles.	Narragansett Bay. Providence.
Barrington; village in northern part of town of same name	Providence.
Bay Side; village and railroad station on Warwick R. R., in Warwick	Narragansett Bay.
Beach; pond in Exeter and in eastern Connecticut; elevation, 280 feet	Moosup.
Beach; pond of salt water near coast of South Kingstown	Newport.
Beacon; hill on Block Island; elevation, 200 feet	Block Island.
Beacon; hill in northern part of Newport; elevation, 120 feet.	Narragansett Bay.
Bear; point projecting into Narragansett Bay from Prudence Island	Narragansett Bay.
Beaver; river tributary to Pawcatuck River, flowing across Richmond.	Charlestown. Kent.
Beaver Head; point on west shore of Conanicut Island	Newport.
Beaver Tail; light-house, located at south point of Conanicut Island at entrance to Narragansett Bay	Newport.
Bellefonte; village in southeastern part of Cranston	Providence.
Belleville; pond in eastern part of North Kingstown	Narragansett Bay.
Belleville; village in North Kingstown	Narragansett Bay.
Benedict; pond in southern part of Providence; elevation, 42 feet	Providence.
Bennett; hill in southern part of Foster	Burrillville.
Berkeley; village in southern part of Cumberland	Providence.
Big; hill in southwestern part of Scituate; altitude, 587 feet	Burrillville.
Big; river tributary to Pawtuxet River, flowing northward across West Greenwich	Kent.
Biscuit; hill in Foster; altitude, 608 feet	Kent.
Bishop Rock; island off coast of Newport, in Narragansett Bay.	Narragansett Bay.
Bissell; cove entering from Narragansett Bay into North Kingstown	Narragansett Bay.
Black; point projecting from Portsmouth into Sakonnet River.	Fall River.
Black Plain; broad summit in Exeter; altitude, 563 feet	Kent.
Black Rock; most southerly point of Block Island	Block Island.
Blackmore; pond in Cranston	Providence.
Blackstone; river heading in Massachusetts and flowing southeast into Seekonk River	Providence.
Bliss Corner; village in Tiverton	Fall River.
Block; island off south coast of Rhode Island and distant from its nearest point about 10 miles. So named after Adrian Block, its discoverer. It constitutes the town of New Shoreham	Block Island.
Blue; pond in eastern part of Hopkinton; elevation, 235 feet	Kent.
Blue; pond in western part of Hopkinton; height, 235 feet	Moosup.
Blue Bill; cove from Sakonnet River, in northern part of Portsmouth	Fall River.
Bonnet; point on east coast of South Kingstown	Newport.
Bonnet, The; hill on east coast of South Kingstown	Newport.
Boon; pond in Exeter; elevation, 347 feet	Kent.
Borden; brook, tributary to Sakonnet River, in Tiverton	Fall River.
Boston; hill in eastern part of Coventry; altitude, 320 feet	Kent.

	Names of sheets.
Boston Neck; projection of land between the main coast and The Cove, in South Kingstown	Newport.
Bowdish; reservoir in eastern part of Glocester; height, 550 feet	Putnam.
Bowen; hill in Coventry; height, 610 feet	Kent.
Bradley; hill in Providence; altitude, 190 feet	Providence.
Branch; river in Burrillville, tributary to the Blackstone River.	Burrillville.
Brandy; brook in Glocester	Burrillville.
Breakheart; hill in southern part of West Greenwich; altitude 340 feet	Kent.
Brenton; cove on west coast of Newport	Newport.
Brenton; point on south coast of Newport	Newport.
Brenton Reef; submerged rock at entrance to Narragansett Bay, over which is anchored a light vessel	Newport.
Bridgetown; village in South Kingstown	Newport.
Bristol; harbor of the village of the same name, being an inlet from Narragansett Bay	Narragansett Bay.
Bristol; town of Bristol County on the shore of Narragansett Bay; area, 9.1 square miles.	Narragansett Bay. Fall River.
Bristol; the principal village in the town of Bristol, on Bristol Harbor, reached by the Providence, Warren and Bristol R. R.	Narragansett Bay.
Bristol Neck; promontory projecting between Narragansett and Mount Hope Bays, and constituting the town of Bristol and part of the town of Warren.	Fall River. Narragansett Bay.
Broad; hill in southern part of South Kingstown; altitude, 226 feet	Charlestown.
Brown; point projecting from Tiverton into Sakonnet River	Fall River.
Brush Neck; peninsula extending into Narragansett Bay from town of Warwick	Narragansett Bay.
Brushy; brook tributary to Pawcatuck River, in Hopkinton	Kent.
Buck; hill in western part of Burrillville; height, 728 feet	Putnam.
Buckhorn; brook tributary to Moosup River, in Coventry	Kent.
Buckeye; brook, the outlet of Warwick Pond, draining it into Narragansett Bay, in Warwick	Narragansett Bay.
Bullock; point in town of Barrington, Bristol County, projecting into Narragansett Bay	Narragansett Bay.
Bullock Neck; peninsula projecting into Narragansett Bay from town of East Providence	Providence.
Bull; point on east coast of Conanicut Island, projecting into Narragansett Bay	Newport.
Burdickville; village in Hopkinton	Charlestown.
Burgess; cove, a slight indentation from Providence River, in southern part of Providence	Providence.
Burlingame; reservoir in Glocester; elevation, 590 feet	Burrillville.
Burnt; hill in Scituate; altitude, 424 feet	Kent.
Burrillville; town in northwestern part of Providence County; area 53·2 square miles.	Blackstone. Putnam. Burrillville.
Burrillville; village in town of Burrillville	Burrillville.
Buttonwood; village and railroad station on the Warwick R. R., in Warwick	Narragansett Bay.
Butts; hill in Portsmouth; elevation, 180 feet	Fall River. Narragansett Bay.
Calf Neck; *projection from town of North Kingstown into Mill Cove*	Narragansett Bay.

	Names of sheets.
Canob; pond in western part of Richmond	Kent.
Canopaug; brook tributary to Pawtuxet River	Burrillville.
Carbuncle; hill in northwestern part of Coventry; altitude, 513 feet	Moosup.
Carbuncle; pond in the western part of Coventry; elevation, 355 feet	Moosup.
Card; ponds (salt) on the coast of South Kingstown	Charlestown.
Carolina; village in Richmond	Charlestown.
Carr; point on coast of Portsmouth, projecting into Narragansett Bay	Narragansett Bay.
Carr; pond in eastern part of West Greenwich; elevation, 327 feet	Kent.
Casey; hill in Exeter; altitude, 442 feet	Kent.
Casey; point projecting from North Kingstown into Narragansett Bay	Narragansett Bay.
Castle; hill on coast of Newport	Newport.
Cat Rocks; hill in Johnston; elevation, 360 feet	Burrillville.
Catamint; small brook tributary to Blackstone River, in Cumberland	Providence.
Cedar Swamp; brook tributary to Pawtuxet river, in Johnston	Burrillville.
Cedar Swamp; brook tributary to Charles River, in Charlestown	Charlestown.
Cedar Swamp; pond in southern part of South Kingstown	Charlestown.
Cedar Swamp; pond in western part of Burrillville	Putnam.
Center; village on Block Island	Block Island.
Centerdale; village in North Providence, on Providence and Springfield R. R	Providence.
Centerville; village in Hopkinton	Kent.
Centerville; village in Warwick	Kent.
Central Falls; village in Lincoln	Providence.
Chagum; pond of salt water in southern part of Block Island	Block Island.
Champlain; hill in western part of Hopkinton; elevation, 400 feet	Stonington.
Charles; river, a large branch of Pawcatuck River, forming boundary between Charlestown and Richmond	Charlestown.
Charlestown; sand beach on south coast of Charlestown	Charlestown.
Charlestown; inlet through Charlestown Beach into Minigret Pond	Charlestown.
Charlestown; town in southern part of Washington County; area, 39·8 square miles	Charlestown.
Charlestown; village in Charlestown	Charlestown.
Chase; cove entering from Kickamuit River into southern part of town of Warwick	Fall River.
Chepachet; river in Burrillville and Glocester	Burrillville.
Chepachet; village in Glocester	Burrillville.
Cherry; brook tributary to Blackstone River, in North Smithfield	Burrillville.
Chipuxet; river tributary to Charles River, in South Kingstown	Charlestown.
Chopmist; hill in northwestern part of Scituate; altitude, 730 feet	Burrillville.
Chopmist; village in Scituate	Burrillville.
Church; cove indenting coast of Little Compton	Sakonnet.
***Church**; cove from* Mount Hope Bay extending into Bristol Neck	Fall River.

	Names of sheets.
Church; point projecting from Tiverton into Sakonnet River	Fall River.
Church; point projecting from coast of Little Compton into Sakonnet River	Sakonnet.
Clapman; pond in Westerly	Stonington.
Clark; point projecting from North Kingstown into Narragansett Bay	Narragansett Bay.
Clay Head; cliff on east coast of Block Island	Block Island.
Clayville; village in Scituate	Burrillville.
Clyde; village in Warwick, on Pawtuxet River	Kent.
Coasters Harbor; island off coast of Newport, in Narragansett Bay	Narragansett Bay.
Coddington; cove, an arm of Narragansett Bay, extending into Middletown	Narragansett Bay.
Coggeshall; cove, part of Narragansett Bay, projecting into Prudence Island	Narragansett Bay.
Coggeshall; point on coast of Portsmouth, projecting into Narragansett Bay	Narragansett Bay.
Coles; village and railroad station on the Warwick R. R., in Warwick	Narragansett Bay.
Colvin; brook, branch of Pawtuxet River, in Scituate	Kent.
Common Fence; southernmost point of Rhode Island	Fall River.
Conanicut; island in southern part of Narragansett Bay, comprising the town of Jamestown, Newport County	Newport.
Congdon; hill in southern part of North Kingstown; elevation, 220 feet	Narragansett Bay.
Conimicut; point projecting into Narragansett Bay from town of Warwick	Narragansett Bay.
Conimicut; village and railroad station on Warwick R. R. in Warwick	Narragansett Bay.
Cooke Store; village in northwest part of Foster	Putnam.
Copper Mine; hill in Cumberland; altitude 400 feet	Providence.
Cork; brook tributary to Pawtuxet River	Burrillville.
Corliss; cove from Providence River, in southern portion of Providence	Providence.
Cormorant; pond, part of Great Salt Pond, on Block Island	Block Island.
Cormorant Rock; island off coast of Middletown	Sakonnet.
Cornelius; island off north coast of Kingstown, in Narragansett Bay	Narragansett Bay.
Cove, The; indentation from Sakonnet River, in southern part of Portsmouth	Fall River.
Cove, The; body of salt water in town of South Kingstown	Newport.
Coventry; town in Kent County, area 17·1 square miles	Kent. Moosup.
Coventry Center; village in Coventry	Kent.
Cow; cove indenting northern part of Block Island	Block Island.
Coweset; village and railroad station upon New York, Providence & Boston R. R., in town of Warwick	Narragansett Bay.
Cranston; town in Providence County, area 30·2 square miles	Narragansett Bay. Providence. Burrillville. Kent.
Cranston; village in northern part of Cranston	Providence.
Cranston Print Works; village in northern part of Cranston	Providence.

	Names of sheets.
Crescent; beach on east coast of Block Island	Block Island.
Crompton; village in Warwick	Kent.
Crookfall; brook tributary to Blackstone River, in Lincoln	Providence.
Cumberland; hill in Cumberland; altitude, 342 feet	Providence.
Cumberland; town in Providence County; area, 27·5 square miles	Franklin.
Cumberland; village in Cumberland, on Blackstone River	Providence.
Cumberland Mills; village in southern part of Cumberland	Providence.
Cunliff; pond in eastern part of Cranston	Providence.
Davisville; village in North Kingstown	Narragansett Bay.
Dead; swamp in southeastern part of West Greenwich	Kent.
Deep; pond in southwest part of Exeter; elevation, 310 feet	Moosup.
Diamond; hill in southwest part of Hopkinton; elevation, 220 feet	Stonington.
Diamond Hill; village in Cumberland	Providence.
Dickens; most westerly point of Block Island	Block Island.
Drownville; village in Barrington	Narragansett Bay.
Drum Rock; hill in Warwick, Kent County; elevation, 220 feet.	Narragansett Bay.
Dry; brook tributary to Pawtuxet River, in Johnston	Burrillville.
Duck; pond in town of Warwick	Narragansett Bay.
Dumping Rock; hill in eastern part of Exeter; altitude, 242 feet	Kent.
Dumplings; group of rocks off east coast of Conanicut Island, in Narragansett Bay	Newport.
Dunnell Print Works; village in Pawtucket	Providence.
Durfee; hill in Glocester; elevation, 805 feet; highest elevation in the State	Burrillville.
Dutch; island in Narragansett Bay	Narragansett Bay.
Dutch Island; harbor, arm of Narragansett Bay, projecting into Conanicut Island.	Newport. Narragansett Bay.
Dye; hill in Exeter and Hopkinton; altitude, 469 feet	Moosup.
Dyer; island in Narragansett Bay, off coast of Portsmouth, of which town it forms a part	Narragansett Bay.
Dyerville; village in Johnston, on Providence and Springfield R. R.	Providence.
East; island off coast of Little Compton	Sakonnet.
East Greenwich; town in Kent County; area, 17·1 square miles.	Kent. Narragansett Bay.
East Greenwich; principal village in town of same name	Narragansett Bay.
Easton; beach on coast of Middletown	Newport.
Easton; point on coast of Middletown	Newport.
Easton; salt-water pond on coast between Newport and Middletown	Newport.
East Providence; town in Providence County; area, 12·5 square miles	Providence.
East Providence; principal village in town of same name	Providence.
East Providence Center; village in northern part of East Providence	Providence.
Edgewood; village in eastern part of Cranston	Providence.
Eldridge; creek flowing into Narragansett Bay from North Kingstown	Narragansett Bay.
Ell; pond in western part of Hopkinton	Moosup.
Elmdale; village in Scituate	Burrillville.

	Names of sheets.
Escoheag; hill in southwestern part of Greenwich; altitude, 541 feet	Moosup.
Escoheag; village in western part of Greenwich	Moosup.
Exeter; town in northern part of Washington County; área, 58 square miles.	Kent. Moosup.
Exeter Hill; village in eastern part of Exetor	Kent.
Fenner; hill in eastern part of Hopkinton; altitude, 367 feet	Kent.
Fenner; pond in eastern part of Cranston	Providence.
Field; hill in southwestern part of Scituate; altitude, 573 feet.	Burrillville.
Field; point projecting into Providence river at its mouth from southern part of town of Providence	Providence.
Fish; cove on coast of South Kingstown	Charlestown.
Fisher; hill in northern part of West Greenwich; altitude, 471 feet	Kent.
Fishing; cove from Narragansett Bay into North Kingstown	Narragansett Bay.
Fiskville; village in Cranston	Kent.
Flat; river tributary to Wood River in, West Greenwich	Kent.
Flat; river tributary to Pawtuxet River, in Coventry	Kent.
Flat River; reservoir in Coventry; elevation, 249 feet	Kent.
Flint; point on coast of Middletown, extending into Sakonnet River	Sakonnet.
Fogland; point projecting from Tiverton into Sakonnet River	Fall River.
Fones; pond in eastern part of Coventry	Kent.
Forestdale; village in North Smithfield	Burrillville.
Fort; hill rising from Providence River to an altitude of 80 feet.	Providence.
Foster; town in southern part of Providence County; area, 48·8 square miles.	Kent. Burrillville. Putnam. Moosup.
Foster; village in northwest part of Foster	Putnam.
Foster Center; village in Foster	Burrillville.
Foster Ledge; hill in Coventry; elevation, 508 feet	Kent.
Fountain Spring; village in Johnston	Burrillville.
Fox; hill in Bristol	Narragansett Bay.
Fox; island off coast of North Kingstown, in Narragansett Bay	Narragansett Bay.
Fox; point projecting from Providence into Providence River at mouth of Seekonk River	Providence.
Freebody; hill on Conanicut Island	Narragansett Bay.
Frenchtown; village in East Greenwich	Kent.
Fresh; pond on Block Island	Block Island.
Fruit; hill in North Providence; altitude, 240 feet	Providence.
Fuller; rock at mouth of Providence River near middle of channel	Providence.
Gardiner; pond of salt water in south part of Middletown	Newport.
Gaspee; point projecting into Narragansett Bay from town of Warwick	Narragansett Bay.
Gates; pond in Richmond	Kent.
Gazzaville; village in Burrillville	Burrillville.
Geneva; village in North Providence	Providence.
Georgiaville; pond in Smithfield; elevation, 557 feet	Burrillville.
Georgiaville; village in Smithfield	Burrillville.
Glendale; village in Burrillville	Burrillville.
Glen Rock; village in South Kingstown	Kent.
Globe Village; village in Woonsocket	Burrillville.

	Names of sheets.
Glocester; town in northwestern part of Providence County; area, 53·2 square miles.	Burrillville. Putnam.
Goat; low, sandy island at entrance to Newport Harbor	Newport.
Gooseberry; island off the coast of Newport	Newport.
Gorton; pond in town of Warwick	Narragansett Bay.
Gould; island in Sakonnet River	Fall River.
Gould; island in Narragansett Bay	Narragansett Bay.
Grace; cove in west coast of Block Island	Block Island.
Grace; point on west coast of Block Island	Block Island.
Graniteville; village in Johnston on Providence and Springfield R. R.	Providence.
Graniteville; village in Burrillville	Burrillville.
Grass; pond in southern part of Coventry; altitude, 432 feet	Kent.
Grassy; pond in western part of Hopkinton; height, 362 feet	Moosup.
Graves; point on coast of Newport	Newport.
Great; swamp in South Kingstown and Richmond, bordering upon Worden Pond	Charlestown.
Great Salt; pond of salt water upon Block Island	Block Island.
Green; hill near south coast of South Kingstown; elevation, 60 feet	Charlestown.
Green; island in Narragansett Bay, off coast of town of Warwick	Narragansett Bay.
Greene; point projecting from North Kingstown into Narragansett Bay	Narragansett Bay.
Greene; village in Coventry	Kent.
Green Hill; pond of salt water on coast of South Kingstown	Charlestown.
Greenville; village in Smithfield	Burrillville.
Greenwich; bay, part of Narragansett Bay in towns of East Greenwich and Warwick	Narragansett Bay.
Greenwich; cove of Greenwich Bay, projecting inland between East Greenwich and Warwick	Narragansett Bay.
Greenwood; village and railroad station upon New York, Providence and Boston R. R., in town of Warwick	Narragansett Bay.
Greystone; village in North Providence	Providence.
Grove; point on east coast of Block Island	Block Island.
Gull; point projecting into Narragansett Bay from Prudence Island	Narragansett Bay.
Gull Rocks; rocky islands in Narragansett Bay off coast of Newport	Narragansett Bay.
Halfway Rock; island off coast of Little Compton	Sakonnet.
Hall; creek flowing into Narragansett Bay from North Kingstown	Narragansett Bay.
Hamilton; hill in southern part of North Kingstown; elevation, 220 feet	Narragansett Bay.
Hamilton; village on coast of North Kingstown	Narragansett Bay.
Hammond; pond in Pawtucket	Providence.
Hannah; brook tributary to Pawtuxet River in Glocester and Scituate	Burrillville.
Harbor; pond of salt water upon Block Island	Block Island.
Harbor, The; village on east coast of Block Island	Block Island.
Harkney; hill in Coventry; elevation, 506 feet	Kent.
Harmony; village in Glocester	Burrillville.
Harris; village in northern part of Coventry on Pawtuxet River.	Kent.
Harrisdale; village in Scituate	Burrillville.

	Names of sheets.
Harrisville; village in Burrillville	Burrillville.
Hemlock; brook tributary to Pawtuxet River	Burrillville
Hen; island in Sakonnet River	Fall River.
Herring; pond in Burrillville; elevation, 392 feet	Burrillville.
High Hill; point projecting from Tiverton into Sakonnet River.	Fall River.
Hillsdale; village in Richmond	Kent.
Hills Grove; village and railroad station upon New York, Providence and Boston R. R. in town of Warwick	Narragansett Bay.
Hog; island in Narragansett Bay, off coast of Bristol	Narragansett Bay.
Hope, Mount; hill on southern part of Bristol Neck in town of Bristol; altitude, 200 feet	Fall River.
Hope; village in Cranston	Kent.
Hope Valley; village in Hopkinton	Kent.
Hopkins; hill in eastern part of West Greenwich; elevation, 487 feet	Kent.
Hopkins; pond in northern part of Exeter; elevation, 337 feet.	Kent.
Hopkins Hollow; village in western part of Coventry	Moosup.
Hopkins Mills; village in Foster	Burrillville.
Hopkinton; town in the southwest part of Washington County; area, 43·6 square miles.	Stonington. Moosup. Charlestown. Kent.
Hopkinton; village in town of same name	Stonington.
Horse Neck; peninsula extending into Narragansett Bay from town of Warwick	Narragansett Bay.
Howard; hill in southern part of Foster; altitude, 687 feet	Burrillville.
Hoxie; village and railroad station on Warwick R. R., in Warwick	Narragansett Bay.
Huckleberry; hill in western part of North Kingstown; altitude, 250 feet	Kent.
Hughesdale; village in southern part of Johnston	Providence.
Hull; cove in east coast of Conanicut Island, Narragansett Bay	Newport.
Hummock; point projecting from northern part of Portsmouth into Sakonnet River	Fall River.
Hungry; hill in northern part of West Greenwich; elevation, 405 feet	Kent.
Hunting; hill in Cumberland; altitude, 400 feet	Providence.
Hunting House; brook tributary to Pawtuxet River, in Glocester and Scituate	Burrillville.
Huntsville; village in Burrillville	Burrillville.
Hygeia Mount; hill in northwest part of Foster; height, 700 feet	Putnam.
India; point projecting from East Providence into Seekonk River	Providence.
Indian; river flowing into Saugatucket River, in South Kingstown	Newport
Indian Cedar; swamp in northern part of Charlestown	Charlestown.
Island Rocks; group of small islands at mouth of Sakonnet River	Sakonnet.
Jackson; village in Cranston	Kent.
Jacob; point on shore of Warren River, in Barrington	Narragansett Bay.
James; pond in Exeter; elevation, 354 feet	Kent.
Jamestown; town of Newport County, comprising Conanicut Island; area, 9·5 square miles	Newport.

	Names of sheets.
Jenks; hill in Lincoln; altitude, 400 feet	Providence.
Jerimoth; hill in northwest part of Foster; height, 799 feet	Putnam.
Johnston; town in Providence County; area 24·1 square miles.	Burrillville. Providence.
Judith; point, the southernmost extremity of town of South Kingstown, at entrance of Narragansett Bay	Newport.
Keech; pond in Glocester; elevation 438 feet	Burrillville.
Kent; brook tributary to Pawtuxet river	Burrillville.
Kent; village in Scituate	Burrillville.
Kenyon; hill in Richmond; altitude 272 feet	Charlestown.
Kenyon; village in Richmond	Charleston.
Kettle; point projecting into Providence River from town of East Providence	Providence.
Kickamuit; river heading in Warren Reservoir, Massachusetts, and flowing through town of Warren into Mount Hope Bay.	Fall River. Narragansett Bay.
Killy; brook tributary to Pawtuxet river in Glocester and Scituate	Burrillville.
Killingly; pond in southwest corner of Glocester and in eastern part of Connecticut	Putnam.
Kingstown; hill in South Kingstown; altitude 252 feet	Charlestown.
Kingstown; village in South Kingstown	Charlestown.
Knightsville; village in Cranston, on New York and New England R. R	Providence.
Lafayette; village in North Kingstown	Narragansett Bay.
Larkin; pond in South Kingstown	Charlestown
Laurel Hill; hill in Cranston; altitude, 460 feet	Burrillville.
Lawton; hill in Cranston; altitude, 460 feet	Burrillville.
Lawton Valley; village in Portsmouth, on coast of Narragansett Bay and on Old Colony and Newport R. R	Narragansett Bay.
Leonard; pond in Providence	Providence.
Leonards Corner; small village in East Providence	Providence.
Lily; pond in south part of Newport	Newport.
Lime Rock; island in Newport Harbor, on which a light-house is established	Newport.
Lime Rock; village in Lincoln	Providence.
Lincoln; town in Providence County; area 19·7 square miles	Providence.
Lippitt; village in Warwick on Pawtuxet River	Kent.
Little; pond in Cumberland	Providence.
Little; river in North Smithfield	Burrillville.
Little Compton; town in southeastern part of Newport county; area 21·4 square miles.	Sakonnet. Fall River.
Little Compton; village in Little Compton	Fall River.
Little Grass; pond in southeastern part of Coventry	Kent.
Little Narragansett; bay at mouth of Pawcatuck River, partly in Rhode Island and partly in Connecticut	Stonington.
Little Neck; pond of salt water near coast of South Kingstown.	Newport.
Little Neck; projection of land between the coast and The Cove in South Kingstown	Newport.
Little Neck; projection from southern part of town of Warren into Kickamuit river	Fall River.
Little Sand; pond in town of Warwick	Narragansett Bay.
Little Tree; point projecting from North Kingstown, into Narragansett Bay	Narragansett Bay.

	Names of sheets.
Locustville; pond in eastern part of Hopkinton	Kent.
Locustville; village in eastern part of Hopkinton	Kent.
Lone; pond in southern part of South Kingstown	Charlestown.
Long; point on south of Greenwich Bay, in town of Warwick	Narragansett Bay.
Long; pond in western part of Hopkinton	Moosup.
Long; pond in southern part of Providence; elevation, 56 feet	Providence.
Long Neck; cove from Sakonnet River in northern part of Portsmouth	Fall River.
Lonsdale; village in southeastern part of Lincoln	Providence.
Lonsdale Station; village in southern part of Cumberland	Providence.
Lorraine Mills; village in Pawtucket	Providence.
Lottery; small village in Westerly, near mouth Pawtucket River	Stonington.
Lymanville; village in North Providence	Providence.
Mackerel; cove from Narragansett Bay into Conanicut Island, cutting it nearly asunder	Newport.
Manton; village in Providence	Providence.
Manville; village in northern part of Lincoln	Providence.
Mapleville; village in Burrillville	Burrillville.
Marsh; island in upper part of Narragansett Bay	Providence.
Marsh; point on south of Greenwich Bay, in town of Warwick	Narragansett Bay.
Mashapaug; pond in southern part of Providence; elevation, 40 feet	Providence.
Matoonoc; village on coast of South Kingstown	Charlestown.
McCurry; point projecting from Portsmouth into Sakonnet River	Fall River.
McSparran; hill in South Kingstown; elevation, 236 feet	Newport.
Meadow; brook tributary to Charles River, in Richmond	Charlestown.
Merino; village in Johnston on Providence and Springfield R. R.	Providence.
Miantonomy; hill in northern part of Newport; elevation, 120 feet	Narragansett Bay.
Middle; pond of salt water in southern part of Block Island	Block Island.
Middletown; town in southern part of Newport County; area, 12·5 square miles.	Fall River. Narragansett Bay. Sakonnet. Newport.
Mill; cove from Narragansett Bay into North Kingstown	Narragansett Bay.
Miller; river tributary to Blackstone River, in Cumberland	Providence.
Millgut; pond of salt water in Popasquash Neck, Bristol	Narragansett Bay.
Millville; village in Exeter	Kent.
Mink; brook tributary to Worden Pond, in South Kingstown	Charlestown.
Misery, Mount; hill in Scituate; altitude, 510 feet	Kent.
Mishnock; pond in northern part of West Greenwich; elevation, 250 feet	Kent.
Mishnock; river tributary to Pawtuxet River, in Coventry	Kent.
Mishnock; swamp in southern part of Coventry	Kent.
Mohegan; village in Burrillville	Burrillville.
Mooresfield; village in South Kingstown	Newport.
Moosup; river tributary to Quinebaug River	Putnam.
Moosup Valley; village in southwest part of Foster	Moosup.
Morgan Mills; village in southern part of Johnston	Providence.
Moscow; village in Hopkinton	Kent.
Moshassuck; river tributary to Blackstone River, in Lincoln	Providence.
Mosquitohawk; brook tributary to Pawtuxet River, in Glocester and Scituate	Burrillville.
***Moswansicut**; pond in Scituate; altitude, 300 feet*	

	Names of sheets.
Moswansicut; river tributary to Pawtuxet River	Burrillville.
Mount Hope; bay, easterly arm of Narragansett Bay	Fall River.
Mount Hope; southern point of Bristol	Fall River.
Mountain Dale; village in Smithfield	Burrillville.
Muscle Shoal; reef off coast of Portsmouth, in Narragansett Bay	Narragansett Bay.
Nag; pond of salt water in Prudence Island, town of Portsmouth	Narragansett Bay.
Nannaquacket; pond of salt-water in western part of Tiverton.	Fall River.
Nannasatucket; river, outlet of Belleville Pond, emptying into Narragansett Bay, in North Kingstown	Narragansett Bay.
Napatree; beach forming south boundary of Little Narragansett Bay, in Westerly	Stonington.
Napatree; point on sandy beach of same name, in Westerly	Stonington.
Narragansett Bay; arm of sea projecting into interior of Rhode Island. It contains numerous large islands and affords many excellent harbors.	Narragansett Bay. Providence. Newport.
Narragansett Pier; summer resort upon east coast, South Kingstown	Newport.
Narrows, the; contracted mouth of Kickamuit River	Fall River.
Nasonville; village in Burrillville	Burrillville.
Neck, the; subdivision of city of Newport	Newport.
Neutaconkanut; hill in southern part of Johnston; altitude, 280 feet	Providence.
Newport; city constituting south part of Rhode Island, in south part Newport County; area, 7·9 square miles	Newport.
New Shoreham; town in Newport County, comprising Block Island; area 10·5 square miles	Block Island.
New York and New England; railroad running southwest from Boston through Rhode Island and Connecticut, with numerous branches.	
New York, Providence and Boston; railroad, whose main line connects New Haven, Conn., with Providence, R. I., and Boston, Mass.; has many branches, principally in southeast Massachusetts.	
Niantic; village in Westerly	Charlestown.
Ninigret; pond (salt) separated from the sea by Charlestown beach	Charlestown.
Nipmuc; hill in Scituate; altitude, 561 feet	Kent.
No Bottom; pond in Richmond	Kent.
Nonquit; pond (salt) in southwest part of Tiverton	Fall River.
Noose Neck; village in West Greenwich	Kent.
Noose Neck; hill in southern part of West Greenwich; altitude, 511 feet	Kent.
North; point projecting into Narragansett Bay from town of Bristol	Narragansett Bay.
North; point projecting into Narragansett Bay from Prudence Island	Narragansett Bay.
North; point on coast of Conanicut Island	Narragansett Bay.
North Kingstown; town in Washington County bordering on Narragansett Bay; area, 42·6 square miles.	Kent. Narragansett Bay.
North Providence; town in Providence County; area, 5·5 square miles	Providence.
North Scituate; village in Scituate	Burrillville.

	Names of sheets.
North Smithfield; town in Providence County; area, 24·2 square miles.	Blackstone. Burrillville. Providence.
Northwest; point projecting into Narragansett Bay from Patience Island	Narragansett Bay.
Norwood; village and railway station in Warwick	Providence.
Noyes Beach; village on coast of Westerly	Stonington.
Noyes; point on coast of Westerly	Stonington.
Oak Valley; village in Burrillville	Burrillville.
Oak Swamp; reservoir in Johnston; altitude, 364 feet	Burrillville.
Oakland; village in Burrillville	Burrillville.
Oakland Beach; village and railroad station on Warwick R. R., in Warwick	Narragansett Bay.
Ochre; point on coast of Newport	Newport.
Occupasspatuxet; cove from Narragansett Bay, in town of Warwick	Narragansett Bay.
Old Colony and Newport; branch of Old Colony Railroad running southward to Newport.	
Old Harbor; point on east coast of Block Island	Block Island.
Old Mill; an inlet, called a creek, from Narragansett Bay, in town of Warwick	Narragansett Bay.
Old Orchard; cove from Sakonnet River, in northern part of Portsmouth	Fall River.
Old Warwick; cove in Narragansett Bay in town of Warwick	Narragansett Bay.
Olney; pond in Lincoln	Providence.
Olneyville; village in Johnston, on Providence and Springfield R. R.	Providence.
Omega; village in northern part of East Providence	Providence.
One Hundred Acre; cove of Barrington River, in town of Barrington	Providence.
One Hundred Acre; pond in South Kingstown	Charlestown. Kent.
Pachet; brook, tributary to Sakonnet River, in town of Little Compton	Fall River.
Paine; brook, tributary to Pawtuxet River, in Foster	Burrillville.
Paradise Rock; hill in southern part of Middletown	Newport.
Parris; brook, tributary to Pawcatuck River, in Exeter	Moosup.
Pascoag; reservoir in Burrillville; elevation, 451 feet	Burrillville.
Pascoag; village in Burrillville	Burrillville.
Pasquiset; pond in northeastern part of Charlestown; elevation, 92 feet	Charlestown.
Passeonkquis; pond (salt), an inlet from Narragansett Bay, in town of Warwick	Narragansett Bay.
Patience; island in Narragansett Bay; part of town in Portsmouth	Narragansett Bay.
Pattaquamscott; river in South Kingstown	Newport.
Pawcatuck; river of considerable importance, heading in southwest part of the State and forming boundary between many of the towns, and, in its lower course, boundary line between Rhode Island and Connecticut. Empties into Little Narragansett Bay.	Charlestown. Stonington.
Pawtucket; town in Providence County; area, 8·5 square miles.	Providence.
Pawtuxet; river tributary to Narragansett Bay, forming boundary between Cranston and Warwick	Providence.

	Names of sheets.
Pawtuxet; village in eastern part of Cranston	Providence.
Pawtuxet; river flowing through central part of State and emptying into head of Narragansett Bay.	Narragansett Bay. Burrillville. Kent.
Pawtuxet Station; village and railway station in northeast part of Warwick	Providence.
Peacedale; village in South Kingstown	Newport.
Penny; hill in southern part of West Greenwich; altitude, 338 feet	Kent.
Perryville; village in South Kingstown	Charlestown.
Pilot; hill on Block Island	Block Island.
Pine; hill in Johnston; altitude, 529 feet	Burrillville.
Pine; hill in Exeter; elevation, 543 feet	Kent.
Pine; hill in Richmond; altitude, 329 feet	Kent.
Pine Hill; point projecting into Narragansett Bay from Providence Island	Narragansett Bay.
Pine Hill; broad strip of elevated land in southwest part of Glocester	Putnam.
Pine Swamp; reservoir in eastern part of Scituate; elevation, 391 feet	Burrillville.
Phenix; village in Warwick and on Pawtuxet River	Kent.
Plainville; village in Burrillville	Burrillville.
Plainville; village in Richmond	Charlestown.
Pleasant Mount; hill in northern part of South Kingstown; height, 333 feet	Kent.
Pocasset; hill in Tiverton; altitude, 340 feet	Fall River.
Pocasset; river, a branch of Pawtuxet River, flowing through Johnston.	Burrillville. Providence.
Pocasset; railway station in Warwick	Providence.
Poquiant; brook tributary to Pawcatuck River, draining Watchaug Pond	Charlestown.
Point Judith; pond (salt) on coast of South Kingstown	Charlestown.
Point Judith Neck; southern part of town of South Kingstown, lying between the open sea and Point Judith Pond	Newport.
Pomham Rock; island in Narragansett Bay near its head	Providence.
Ponaganset; reservoir in Glocester; elevation, 635 feet	Burrillville
Ponaganset; river tributary to Pawtuxet River	Burrillville.
Ponaganset; village in Scituate	Burrillville.
Pontiac; village in Warwick on Pawtuxet Valley R. R	Narragansett Bay.
Popasquash; point, the southern extremity of Popasquash Neck, in town of Bristol	Narragansett Bay.
Popasquash Neck; peninsula projecting into Narragansett Bay, forming part of town of Bristol	Narragansett Bay.
Poplar; point projecting from North Kingstown into Narragansett Bay	Narragansett Bay.
Portsmouth; town in Newport County bordering on Narragansett Bay; area, 23·4 square miles.	Narragansett Bay. Fall River.
Portsmouth; village in Portsmouth	Fall River.
Portsmouth Grove; village in Portsmouth on coast of Narragansett Bay and on Old Colony and Newport R. R	Narragansett Bay.
Potowomut; river draining into Narragansett Bay and forming part of boundary between East Greenwich, North Kingstown and Warwick	Narragansett Bay.

	Names of sheets.
Potowomut Neck; peninsula, part of Warwick, which projects into Greenwich Bay and Potowomut River	Narragansett Bay.
Potter; cove, a part of Narragansett Bay entering Prudence Island	Narragansett Bay.
Potter; cove, entering Conanicut Island from Narragansett Bay.	Narragansett Bay.
Potter Hill; village in southwest part of Hopkinton	Stonington.
Potterville; village in Coventry	Kent.
Pray; hill on line between Glocester and Foster; elevation, 693 feet	Burrillville.
Premisy; hill in North Smithfield; altitude, 340 feet	Burrillville.
Primrose Station; village and railway station in North Smithfield	Burrillville.
Print Works; pond in northern part of Cranston	Providence.
Providence; city in Providence County; the largest and most important in the State; area, 15·7 square miles	Providence.
Prudence; island in Narragansett Bay, forming part of town of Portsmouth	Narragansett Bay.
Quaker; hill in Portsmouth; elevation, 260 feet	Narragansett Bay.
Queens; river tributary to Powcatuck River, flowing southwesterly through Exeter	Kent.
Quicksand; pond (salt) near coast in town of Little Compton..	Fall River.
Quidnick; reservoir in Coventry; altitude, 476 feet	Kent.
Quidnick; village in Coventry	Kent.
Quonset; point projecting from North Kingstown.	
Quonochontaug; pond (salt) separated from the sea by Quonochontaug Beach	Charlestown.
Quonochontaug; village in Westerly	Charlestown.
Quonochontaug Beach; sand bar on coast of Charlestown....	Charlestown.
Rabbit; island off coast of North Kingstown, in Narragansett Bay	Narragansett Bay.
Raccoon; hill in West Greenwich; altitude, 601 feet	Kent.
Randall; pond in northern part of Cranston	Providence.
Rhode Island, also called Aquidneck; large island in Narragansett Bay, comprising towns of Newport, Middletown, and Portsmouth	Newport.
Rice; village in western part of Coventry	Moosup.
Richmond; town in southern part of Washington county; area, 38·9 square miles.	Charlestown. Kent.
Richmond; village in Scituate	Burrillville.
Richmond Paper Company; village in northern part of East Providence	Providence.
River View; village and railway station on Warwick R. R., in Warwick	Narragansett Bay.
Riverpoint; in Warwick, on Pawtuxet River	Kent.
Riverside Station; coast village in East Providence	Providence.
Robin; hill in southern part of Providence on shore of Providence River; altitude, 80 feet	Providence.
Rock; hill in northern part of Scituate	Burrillville.
Rock; hill in Coventry; elevation, 433 feet	Kent.
Rock; island in upper part of Narragansett Bay	Providence.
Rock; point on south coast of South Kingstown	Charlestown.
Rockland; village in Scituate	Burrillville.
Rockville; village in western part of Hopkinton	Moosup.
Rocky Brook; village in South Kingstown	Charlestown.
Rocky; hill in northern part of Cranston; altitude, 183 feet...	Providence.

	Names of sheets.
Rocky; point projecting into Narragansett Bay from town of Warwick	Narragansett Bay.
Rocky Point; village and railroad station on Warwick R. R., in Warwick	Narragansett Bay.
Roger Williams Park; pleasure ground of the city of Providence, situated near its southern boundary	Providence.
Rome; point projecting from North Kingstown into Narragansett Bay	Narragansett Bay.
Rose; hill in South Kingstown, Washington County; elevation, 240 feet	Newport.
Rose; island in southern part of Narragansett Bay	Newport.
Round; pond (salt) near coast of Little Compton	Sakonnet.
Round; pond in western part of Burrillville	Putman.
Round; swamp and point on Conanicut Island	Narragansett Bay.
Rounds; hill on line between Scituate and Foster; altitude, 620 feet	Burrillville.
Round Rocks; hill in Johnston	Burrillville.
Round Top; village in Burrillville	Burrillville.
Rumford; village in northern part of East Providence	Providence.
Rumstick Neck; projection on south coast of Barrington, into Narragansett Bay	Narragansett Bay.
Runnins; river flowing into Narragansett Bay and forming part of eastern boundary of State and of the town of East Providence	Providence.
Rush; brook tributary to Pawtuxet River	Burrillville.
Sabin; point projecting from East Providence into head of Narragansett Bay	Providence.
Sachuest; beach on coast of Middletown	Sakonnet. Newport.
Sachuest; point, the most southern point of Middletown at mouth of Sakonnet River	Sakonnet.
Sachuest Neck; peninsula projecting from Middletown at mouth of Sakonnet River	Sakonnet.
Sakonnet; point, the most southern extremity of Little Compton.	Sakonnet.
Sakonnet; river, an arm of Narragansett Bay, which connects Mount Hope Bay with it.	Sakonnet. Fall River.
Sand; point projecting into Narragansett Bay from Prudence Island	Narragansett Bay.
Sand; point on coast of Conanicut Island	Narragansett Bay.
Sand; point projecting into Narragansett Bay from the town of Warwick	Narragansett Bay.
Sand; pond in town of Warwick	Narragansett Bay.
Sands; pond on Block Island	Block Island.
Sand Hill; cove in south coast of South Kingstown	Newport.
Sandy; point on south shore of Greenwich Bay in town of Warwick	Narragansett Bay.
Sandy; point forming outer end of Napatree Beach in Westerly.	Stonington.
Sandy; point projecting from Portsmouth into Sakonnet River.	Fall River.
Sandy; point on north end of Block Island; area 10·5 square miles	Block Island.
Sapowet; point projecting from Tiverton into Sakonnet River.	Fall River.
Sassafras; point projecting from southern part of Providence into Providence River	Providence.
Sauga; point projecting from North Kingstown into Narragansett Bay	Narragansett Bay.

	Names of sheets.
Saugatuckett; river flowing into the Atlantic through Point Judith Pond in South Kingstown	Newport.
Saunderstown; coast village in southeast part of North Kingstown	Narragansett Bay.
Saundersville; village in Scituate	Burrillville.
Sawmill; hill in eastern part of Coventry; altitude, 226 feet	Kent.
Saxonville; village in Burrillville	Burrillville.
Sayles; hill in North Smithfield; altitude, 440 feet	Burrillville.
Sayles Bleachery; village in Lincoln	Providence.
Saylesville; village in Lincoln	Providence.
School House; pond in central part of Charlestown	Charlestown.
Scituate; town in Providence County; area, 52·3 square miles.	Burrillville. Kent.
Scott; brook tributary to Blackstone River in Cumberland	Providence.
Scott; pond in Lincoln	Providence.
Seal; island off southern point of Bristol Neck	Fall River.
Seekonk; river tributary to Providence River, flowing through Pawtucket and forming boundary between Providence and East Providence, at head of Narragansett Bay	Providence.
Shannock; hill in Richmond; altitude, 280 feet	Charlestown.
Shannock; village in Richmond	Charlestown.
Shawomet Beach; village and railroad station on Warwick R. R. in Warwick	Narragansett Bay.
Sheep; point on coast of Newport	Newport.
Sheep Pen; cove, a part of Narragansett Bay entering Prudence Island	Narragansett Bay.
Sherman; hill in western part of North Kingstown; altitude, 292 feet	Kent.
Sherman; island in Sakonnet River	Fall River.
Sherman Station; coast village in East Providence	Providence.
Shippee; brook tributary to Pawtuxet River, in Foster	Burrillville.
Shrub; hill in northern part of Exeter	Kent.
Shumunkanug; hill in western part of Charlestown; altitude, 228 feet	Charlestown.
Silver; lake in South Kingstown	Newport.
Silver Hook; railway station in Warwick	Providence.
Silver Lake; village in Johnston	Providence.
Silver Spring Station; coast village in East Providence	Providence.
Simmonsville; village in Johnston	Burrillville.
Sin and Flesh; brook tributary to Sakonnet River, in town of Tiverton	Fall River.
Sky High; hill in Providence; elevation 140 feet	Providence.
Slack; reservoir in Smithfield and Johnston; elevation, 269 feet.	Burrillville.
Slate; hill in Portsmouth; elevation, 260 feet	Narragansett Bay.
Slatersville; village in northern part of North Smithfield	Blackstone. Burrillville.
Slocumville; village in North Kingstown	Kent.
Smith; beach on coast of Middletown near mouth of Sakonnet River	Sakonnet.
Smith; cove, a part of Warren River entering Barrington	Narragansett Bay.
Smith and Sayles; reservoir in Glocester; elevation, 426 feet	Burrillville.
Smithfield; town in Providence County; area, 27·1 square miles.	Burrillville. Providence.
Smithfield Station; village in Smithfield	Burrillville.

	Names of sheets.
Skunk; hill in northeastern part of Hopkinton; altitude, 322 feet	Kent.
Snake; hill in Glocester; elevation, 440 feet	Burrillville.
Snake; hill in Burrillville; altitude, 533 feet	Burrillville.
Snake Den; hill in Johnston; elevation, 380 feet	Burrillville.
Sneech; brook tributary to Blackstone River in Cumberland	Providence.
Sneech; pond in Cumberland	Providence.
Sockanosset; reservoir, a small artificial pond in Cranston	Providence.
Sockanosset; village in Cranston on Providence R. R.	Providence.
Sodom; brook tributary to Queen River in Exeter	Kent.
South Foster; village in Foster	Burrillville.
South Kingstown; seaboard town in southeastern portion of Washington County; area, 77·9 square miles.	Kent. Charlestown. Newport.
South Scituate; village in Scituate	Burrillville.
Southeast; point on coast of Block Island	Block Island.
Southwest; point projecting from Hog Island into Narragansett Bay	Narragansett Bay.
Southwest; point on east coast of Conanicut Island, projecting into Narragansett Bay	Newport.
Southwest; point on coast of Block Island	Block Island.
Spar; island in Mount Hope Bay	Fall River.
Spectacle; island in Sakonnet River	Fall River.
Spectacle; pond in northern part of Cranston	Providence.
Spencer; hill in Warwick; elevation, 348 feet	Narragansett Bay.
Spink Neck; island in Allen Harbor, North Kingstown	Narragansett Bay.
Spragueville; a village in Smithfield	Burrillville.
Spring Green; pond in town of Warwick	Narragansett Bay.
Spring Grove; village in Glocester	Burrillville.
Spring Grove; village and railroad station on Warwick R. R. in Warwick	Narragansett Bay.
Spruce; brook tributary to Pawtuxet River	Burrillville.
Squantum; coast village in East Providence	Providence.
Squepaug; village in South Kingstown	Kent.
Stafford; pond in northern part of Tiverton	Fall River.
Starve Goat; island in Narragansett Bay near its head	Providence.
Steere; hill in Glocester; elevation, 580 feet	Burrillville.
Stillwater; village in Smithfield	Burrillville.
Stump; hill in Lincoln; altitude, 304 feet	Providence.
Sucker; brook in Burrillville and Glocester tributary to Chepachet River	Burrillville.
Sucker; pond in Burrillville; elevation, 437 feet	Burrillville.
Sugarloaf; hill in South Kingstown	Charlestown.
Summit; village in Coventry	Kent.
Swamp; brook tributary to Pawtuxet River	Burrillville.
Taney; brook in Richmond	Charlestown.
Tarkiln Station; village in Burrillville	Burrillville.
Tefft; hill in northern part of Richmond; altitude, 461 feet	Kent.
Tefft; hill in South Kingstown; altitude, 255 feet	Charlestown.
Ten Mile; river tributary to Seekonk River, which forms a portion of eastern boundary of the State and of the town of East Providence	Providence.
Thirty Acre; pond in South Kingstown	Charlestown.
Thornton; village in southern part of Johnston	Providence.

	Names of sheets.
Tiogue; reservoir in eastern part of Coventry	Kent.
Tippecan; pond on boundary between Greenwich and Exeter; altitude, 375 feet	Moosup.
Tiverton; town in Newport County; area, 31.8 square miles	Fall River.
Tiverton; village in Tiverton	Fall River.
Tiverton Four Corners; village in Tiverton	Fall River.
Tom Mount; hill in Exeter; altitude 428 feet	Kent.
Tomaquang; brook tributary to Pawcatuck River in Hopkinton.	Stonington.
Tommy; island in Sakonnet River	Fall River.
Tourtellot; hill in Glocester; elevation, 684 feet	Burrillville.
Tower; hill. having the form of a long ridge with a bluff face to the east in South Kingstown; elevation, 178 feet	Newport.
Toweset; point projecting from southern part of Warren into Mount Hope Bay	Fall River.
Town; tidal pond in northern part of Portsmouth	Fall River.
Truns; pond (salt) upon Block Island	Block Island.
Truston; pond (salt) on coast of South Kingstown	Charlestown.
Tucker; pond in South Kingstown; elevation, 97 feet	Charlestown.
Tunipus; pond on coast of Little Compton	Sakonnet.
Tunipus; beach on coast of Little Compton	Sakonnet.
Tunk; hill in southern part of Scituate; altitude, 546 feet	Burrillville.
Tuscatucket; river in town of Warwick, flowing into Narragansett Bay	Narragansett Bay.
Twin; islands in Seekonk River just above its mouth	Providence.
Upper; pond forming the northern portion of Point Judith Pond.	Newport.
Usher; cove extending from Bristol Harbor in town of Bristol.	Narragansett Bay.
Usquepaug; river tributary to Charles River in Richmond	Charlestown.
Valley Falls; village in southern part of Cumberland	Providence.
Vernon, village in southern part of Foster	Kent.
Vue de l'eau; coast village in East Providence	Providence.
Wakefield; pond in western part of Burrillville; height, 535 feet	Putnam.
Wakefield; village in South Kingstown	Charlestown. Newport.
Walcott; fort on Goat Island at entrance to Newport Harbor..	Newport.
Wallum; pond in western part of Burrillville; height, 575 feet..	Putnam.
Wanskuck; village in Providence	Providence.
Warren; point on coast of Little Compton	Sakonnet.
Warren; river heading in Massachusetts and flowing between towns of Warren and Barrington into Narragansett Bay.	Providence. Narragansett Bay.
Warren; town in northeastern part of Bristol County; area, 5·9 square miles.	Fall River. Kent. Narragansett Bay.
Warren; principal village in town of same name in Bristol County at junction of Providence, Warren and Bristol, and Warren and Fall River railroads	Narragansett Bay.
Warren Neck; projection of land into Mount Hope Bay mainly within town of Warren	Fall River.
Warwick; pond in town of Warwick	Narragansett Bay.
Warwick; town in Kent County; area, 44·2 square miles	Narragansett Bay. Providence.
Warwick; village and railroad station on Warwick R. R. in Warwick	Narragansett Bay.

	Names of sheets.
Warwick Neck; peninsula projecting into Narragansett Bay, part of the town of Warwick	Narragansett Bay.
Wash; pond of salt water in southern part of Block Island	Block Island.
Wash; pond in southern part of South Kingstown	Charlestown.
Washington; village in Coventry	Kent.
Watchaug; pond in southwestern part of Charlestown	Charlestown.
Watchemoket; cove projecting into East Providence from Providence River	Providence.
Watch Hill; seashore village on coast of Westerly	Stonington.
Watch Hill; point near the village of same name in Westerly	Stonington.
Watch Hill; pond or salt lagoon in south part of Westerly	Stonington.
Westerly; village in town of same name situated on Pawcatuck River and New York, Providence and Boston R. R	Stonington.
White; brook in Richmond	Charlestown.
White; pond in southern part of South Kingstown	Charlestown.
White Rock; village in west part of Westerly	Stonington.
Whortleberry; hill in North Smithfield; altitude, 460 feet	Burrillville.
Wickaboxet; pond in western part of Greenwich; elevation, 314 feet	Moosup.
Wickford; cove, a part of Narragansett Bay entering North Kingstown	Narragansett Bay.
Wickford; village on coast of North Kingstown	Narragansett Bay.
Wickford Junction; village and railway station in North Kingstown	Narragansett Bay.
Wilbur; hill in Richmond; altitude, 300 feet	Charlestown.
Wild Goose; point projecting from North Kingstown into Narragansett Bay	Narragansett Bay.
Wilson; reservoir in Burrillville; elevation, 446 feet	Burrillville.
Waterman; reservoir in Smithfield and Glocester; elevation, 438 feet	Burrillville.
Wayland Station; station in Cranston on New York and New England R. R	Providence.
Weaver; hill in southern part of Coventry; elevation, 601 feet	Kent.
Weeks; hill in Coventry; altitude, 600 feet	Kent.
Wesquage; pond of salt water near east coast of South Kingstown	Newport.
West; island off coast of Little Compton	Sakonnet
West Glocester; village in western part of Glocester	Putnam.
West Greenville; village in Smithfield	Burrillville.
West Greenwich; town in Kent County	Kent.
West Greenwich Center; village in western part of Greenwich	Moosup.
West Kingstown; village in South Kingstown, on Providence R. R	Charlestown.
West Meadow; brook in southern part of Foster	Burrillville.
Westconnaug; reservoir in southeastern part of Foster; elevation, 450 feet	Burrillville.
Westerly; town in southwest part of Washington County; area, 31·1 square miles	Charlestown.
Wincheck; pond in western part of Hopkinton; height, 315 feet	Moosup.
Wind Mill; hill on boundary between Pawtucket, North Providence, and Providence: altitude, 180 feet	Providence.
Windmill; hill in northwest part of Little Compton; altitude, *140 feet*	Fall River.

	Names of sheets.
Wionkhiege; hill in Smithfield; elevation 557 feet	Burrillville.
Wolf Rock; group of hills in southeastern part of Exeter; altitude, 302 feet	Kent.
Worden; pond in South Kingstown, drained by Charles River; elevation, 94 feet	Charlestown.
Wood; river tributary to Pawcatuck River, forming boundary between Richmond and Hopkinton	Charlestown.
Wood River Junction; village in Richmond	Charlestown.
Woods Castle; point on coast of Middletown, extending into Sakonnet River.	Sakonnet. Fall River.
Woodlawn; village in Pawtucket	Providence.
Woodville; village in Hopkinton	Charlestown.
Woodville; village in North Providence	Providence.
Woody; hill in Exeter; altitude, 427 feet	Kent.
Woonasquatucket; branch of Providence River, forming boundary between Providence, North Providence, and Johnston	Providence.
Woonsocket; town in northern part of Providence County; area, 8·4 square miles.	Franklin. Blackstone. Burrillville. Providence.
Woonsocket; hill in North Smithfield; altitude, 588 feet	Burrillville.
Wyoming; village in western part of Richmond	Kent.
Yawgoag: pond in western part of Hopkinton; height, 329 feet.	Moosup.
Yawgoo; pond in northern part of South Kingstown; elevation, 120 feet	Kent.
Yawker; hill in southwestern part of Exeter; altitude, 315 feet.	Kent.

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DEPARTMENT OF THE INTERIOR

BULLETIN

OF THE

UNITED STATES

GEOLOGICAL SURVEY

No. 116

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

UNITED STATES GEOLOGICAL SURVEY

J. W. POWELL, DIRECTOR

J C Branner

A GEOGRAPHIC DICTIONARY OF MASSACHUSETTS

BY

HENRY GANNETT

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
U. S. GEOLOGICAL SURVEY, DIVISION OF GEOGRAPHY,
Washington, D. C., January 15, 1894.

SIR: I have the honor to transmit herewith a geographic dictionary of Massachusetts.

Very respectfully,

HENRY GANNETT,
Chief Topographer.

Hon. J. W. POWELL,
Director U. S. Geological Survey.

A GEOGRAPHIC DICTIONARY OF MASSACHUSETTS.

The Geographic Dictionary of Massachusetts, which constitutes this bulletin, is designed to aid in finding any geographic feature upon the atlas sheets of that State which are published by the U. S. Geological Survey. It contains all the names given upon the sheets, and is limited to them. Under each name is a brief statement showing the feature it designates and its location, and opposite to it the name of the atlas sheet, or sheets, upon which it is to be found.

The atlas sheets upon which the State is represented are the result of a survey made at the joint expense of the U. S. Geological Survey and the Commonwealth of Massachusetts. The scale upon which they are published is 1:62500; that is, 62,500 inches upon the ground, or very nearly one mile, is represented by one inch upon the map. Relief, or the variation of elevation, is represented by contour lines, or lines of equal elevation above mean sea level. These contour lines are at vertical intervals of 20 feet; that is, each successive contour indicates a level 20 feet higher than the one below it. Upon the map all water bodies—bays, ponds, rivers, etc.—are represented in blue; the contour lines representing the relief, together with the figures representing absolute elevations, are printed in brown; while the lettering and all symbols of the works of man are printed in black.

The area of the State is represented upon 54 sheets, each sheet comprising 15 minutes of latitude by 15 minutes of longitude. The territory covered by each sheet is, therefore, about 17½ miles from north to south, and about 13 miles from east to west, and its area is about 225 square miles. Of these sheets 29 only lie entirely or virtually within the State, the others comprising portions of the adjacent States of New Hampshire, Vermont, New York, Rhode Island and Connecticut. The following is a list of the sheets, showing the names assigned to them and their limits in latitude and longitude:

Sheets.	Limits.					
	In latitude.			In longitude.		
	° ′		° ′	° ′		° ′
Newburyport	42 45	to	43 00	70 45	to	71 00
Haverhill	42 45		43 00	71 00		71 15
Gloucester	42 30		42 45	70 30		70 45
Salem	42 30		42 45	70 45		71 00
Lawrence	42 30		42 45	71 00		71 15
Lowell	42 30		42 45	71 15		71 30
Groton	42 30		42 45	71 30		71 45

Sheets.	Limits.			
	In latitude.		In longitude.	
	° ′	° ′	° ′	° ′
Fitchburg	42 30	42 45	71 45	72 00
Winchendon	42 30	42 45	72 00	72 15
Warwick	42 30	42 45	72 15	72 30
Greenfield	42 30	42 45	72 30	72 45
Hawley	42 30	42 45	72 45	73 00
Greylock	42 30	42 45	73 00	73 15
Berlin	42 30	42 45	73 15	73 30
Boston Bay	42 15	42 30	70 45	71 00
Boston	42 15	42 30	71 00	71 15
Framingham	42 15	42 30	71 15	71 30
Marlboro	42 15	42 30	71 30	71 45
Worcester	42 15	42 30	71 45	72 00
Barre	42 15	42 30	72 00	72 15
Belchertown	42 15	42 30	72 15	72 30
Northampton	42 15	42 30	72 30	72 45
Chesterfield	42 15	42 30	72 45	73 00
Becket	42 15	42 30	73 00	73 15
Pittsfield	42 15	42 30	73 15	73 30
Provincetown	42 00	42 15	70 00	70 15
Duxbury	42 00	42 15	70 30	70 45
Abington	42 00	42 15	70 45	71 00
Dedham	42 00	42 15	71 00	71 15
Franklin	42 00	42 15	71 15	71 30
Blackstone	42 00	42 15	71 30	71 45
Webster	42 00	42 15	71 45	72 00
Brookfield	42 00	42 15	72 00	72 15
Palmer	42 00	42 15	72 15	72 30
Springfield	42 00	42 15	72 30	72 45
Granville	42 00	42 15	72 45	73 00
Sandisfield	42 00	42 15	73 00	73 15
Sheffield	42 00	42 15	73 15	73 30
Wellfleet	41 45	42 00	69 55	70 10
Plymouth	41 45	42 00	70 30	70 45
Middleboro	41 45	42 00	70 45	71 00
Taunton	41 45	42 00	71 00	71 15
Providence	41 45	42 00	71 15	71 30
Chatham	41 30	41 45	69 45	70 00
Yarmouth	41 30	41 45	70 00	70 15
Barnstable	41 32	41 47	70 15	70 30
Falmouth	41 30	41 45	70 39	70 45
New Bedford	41 30	41 45	70 45	71 00
Fall River	41 30	41 45	71 00	71 15
Nantucket	41 13	41 28	69 57	70 12
Muskeget	41 15	41 30	70 15	70 30
Marthas Vineyard	41 15	41 30	70 30	70 45
Gay Head	41 15	41 30	70 45	71 00
Sakonnet	41 15	41 30	71 00	71 15

The spelling of the names conforms to the decisions of the United States Board on Geographic Names.

Massachusetts is one of the original thirteen States. It was the sixth to ratify the Constitution, which it did on February 6, 1788.

The boundary lines between Massachusetts and adjacent States are somewhat irregular. They were established, in the main, during colonial days as the result of compromises between conflicting claims for jurisdiction among the colonies. The lines were surveyed and marked also in early days, when methods of surveying were much cruder than at present. Both of these facts serve to account for their irregularity.

The eastern part of the north boundary is a line traced at a distance of 3 miles from the main course of the Merrimac River and parallel to its windings. As run and marked it consists of a series of straight lines broken by angles generally parallel to the river. At a point three miles north of Pawtucket Falls it ceases to run parallel to the river, and thence it was designed to run due west. This was the result of a compromise between the colonies of Massachusetts Bay and New Hampshire, thus settled by a decree of the king. The line westward from that point was run under instructions from the governor of New Hampshire, who furnished to the surveyor as the magnetic variation an amount largely in excess of the fact. The line was run accordingly, and consequently is directed considerably north of west.

The west boundary of the State is the result of an agreement made with the New York colony, and the south boundary is similarly the result of compromises and conventions between the colony and State of Massachusetts and its neighbors, Connecticut and Rhode Island. These boundaries are so irregular that it is impossible to describe them otherwise than by means of a map or by a detailed statement of courses and distances.

The total area of the State is 8,315 square miles, of which it is estimated that 275 square miles are water surface, consisting of landlocked bays, ponds, and rivers, leaving as the land area 8,040 square miles.

The State is divided into fourteen counties, and these are subdivided into towns and cities, of which there are 352. The following table presents a list of the counties, with the number of towns and cities in each and the area of each county:

County.	Towns and cities.	Area.
		Sq. miles.
Barnstable	15	434
Berkshire	32	942
Bristol	20	589
Dukes	6	110
Essex	35	554
Franklin	26	730
Hampden	22	604
Hampshire	23	620
Middlesex	54	840
Nantucket	1	51
Norfolk	27	433
Plymouth	27	722
Suffolk	4	51
Worcester	59	1,635
Total	352	8,315

A GEOGRAPHIC DICTIONARY OF MASSACHUSETTS.

	Atlas sheets.
Abbott; brook in west part of Chester, about 4 miles long, tributary to west branch of Westfield River	Chesterfield.
Abbott; hill in west part of Chester; elevation, 1,455 feet	Chesterfield.
Abbott Run; stream in North Attleboro and Attleboro, Mass.; and in Rhode Island	Providence.
Abington; town in Plymouth County; area, 11 square miles	Abington.
Abner; pond in southern part of Plymouth	Plymouth.
Abram; hill in Tyngsboro; elevation, 280 feet	Lowell.
Accord; pond in western part of South Scituate	Abington.
Acton; town in Middlesex County; area, 21 square miles	Framingham. Lowell.
Acton Center; village in Acton	Framingham.
Acushnet; town in southeastern part of Bristol County; area, 19 square miles	New Bedford.
Acushnet; village in town of same name at head of New Bedford Harbor	New Bedford.
Acushnet; river, outlet of New Bedford Reservoir in Acushnet, flowing into New Bedford Harbor	New Bedford.
Acushnet Cedar; swamp in northern part of New Bedford	New Bedford.
Acushnet Station; railway station in New Bedford	New Bedford.
Adams; town in northern part of Berkshire County; area 23 square miles	Greylock.
Adams; village in southern part of town of same name	Greylock.
Adams; mountain in Rowe; altitude 1,900 feet	Hawley.
Adamsville; village in town of Coleraine	Greenfield.
Addition; hill in Marlboro; elevation 440 feet	Marlboro.
Agassiz Rock; hill in town of Manchester	Salem.
Agawam; town in Hampden County; area 28 square miles	Springfield.
Agawam; village in town of same name	Springfield.
Agawam; village in Wareham	Plymouth.
Agawam; brook in Stockbridge, flowing into Konkapot Brook	Pittsfield.
Agawam; lake on boundary between Great Barrington and Stockbridge	Pittsfield.
Agawam; river tributary to Wareham River, draining parts of Wareham and Plymouth	Plymouth.
Alum; hill in southeastern part of Sheffield; elevation, 1,099 feet	Sheffield.
Alden; hill in Lakeville; elevation, 178 feet	Middleboro.
Aldrich Mills; village in northwest part of Granby	Northampton.
Alexander; hill in Northfield; elevation, 1,220 feet	Warwick.
Alford; town in southwestern part of Berkshire County; area, 10 square miles.	Pittsfield. Sheffield.
Alford; village in town of same name	Sheffield.

	Atlas sheets.
Allen; brook in Shelburne and Greenfield, tributary to Green River	Greenfield.
Allen; harbor on southern coast of Harwich	Yarmouth.
Allen; hill in Barre; elevation, 1,225 feet	Barre.
Allen; point at northeast extremity of Chatham	Chatham.
Allen; pond in southern part of Dartmouth	New Bedford. Fall River.
Allerton; point on northeast coast of Hull	Boston Bay.
Allston; village in Boston on Boston and Albany R. R	Boston.
Almshouse Station; village on Salem and Lawrence R. R. in Tewksbury	Lawrence.
Altar Rock; hills in Nantucket	Nantucket.
Alum; pond in northwest part of Sturbridge	Brookfield.
Ames; pond in southern part of Stoughton	Dedham.
Amesbury; town in Essex County; area, 14 square miles	Newburyport.
Amesbury; village in town of Amesbury	Newburyport.
Amherst; town in northern part of Hampshire County; area, 26 square miles.	Belchertown. Northampton.
Amherst; village in town of same name	Northampton.
Amos; point at southern extremity of Chatham	Chatham.
Andover; town in Essex County; area, 33 square miles	Lawrence.
Andover; principal village in town of same name on Boston and Maine R. R	Lawrence.
Andrews; pond in Harwich	Yarmouth.
Angelica; point at southeastern extremity of Mattapoisett	New Bedford.
Annasnappet; brook in Plympton and Carver	Middleboro.
Annawon Rock; hill in Rehoboth	Taunton.
Annisquam; village in northern part of Gloucester on Annisquam Harbor	Gloucester.
Annisquam; harbor on northern coast of Gloucester	Gloucester.
Annursnack; hill in Concord	Framingham.
Anthony; creek tributary to Hoosic River in eastern part of Adams	Greylock.
Apple; island south of Winthrop	Boston Bay.
Apponaganset; village in eastern part of Dartmouth	New Bedford.
Apponaganset; harbor on eastern coast of Dartmouth; also called Apponaganset Bay	New Bedford.
Apponaganset; river in Dartmouth, flowing into Apponaganset harbor	New Bedford.
Ararat, Mount; hill in Millbury; altitude, 700 feet	Webster.
Archelaus; hill in West Newbury; elevation, 240 feet	Newburyport.
Archer; pond in Wrentham	Franklin.
Arlington; town in Middlesex county; area, 5 square miles	Boston.
Arlington; village in town of same name	Boston.
Arlington Heights; village in town of same name	Boston.
Arthurs Seat; hill in Deerfield; elevation, 927 feet	Greenfield.
Artichoke; river in West Newbury	Newburyport.
Arbajona; river between Mystic Lakes and ponds at head of Willow Brook in Winchester	Boston.
Asbury Grove; village in southwestern part of Hamilton	Salem.
Ash; swamp in Townsend	Fitchburg.
Ashby; town in Middlesex County; area, 23 square miles	Fitchburg.
Ashby; village in town of same name	Fitchburg.
Ashburnham*; town in Worcester County; area, 42 square miles*	Fitchburg.

	Atlas sheets.
Ashburnham; village in town of same name	Fitchburg.
Ashburnham Junction; station in town of Ashburnham	Fitchburg.
Ashfield; town in Franklin County; area, 70 square miles	Chesterfield. Hawley.
Ashland; town in Middlesex County; area, 13 square miles	Framingham. Franklin.
Ashland; village in town of same name	Framingham.
Ashley; brook, outlet of Ashley Lake in Washington, flowing into Housatonic River	Becket.
Ashley Falls; village in southern part of Sheffield on Housatonic River	Sheffield.
Ashley; lake near central part of Washington	Becket.
Ashley; mountain in southwestern part of Mount Washington, Berkshire County	Sheffield.
Ashley; pond in Holyoke	Springfield.
Ashleyhill; brook in southern part of Mount Washington, tributary to Lee Pond Brook	Sheffield.
Ashleyville; village in West Springfield	Springfield.
Ashmore; lake in eastern part of Hinsdale	Becket.
Ashod; village in west part of Duxbury	Abington.
Ashuela; brook in Gill and Bernardston, flowing into Connecticut River	Warwick.
Ashumet; pond on boundary line between Falmouth and Mashpee	Falmouth.
Asnebumskit; brook in Holden	Worcester.
Asnebumskit; hill in Paxton; elevation, 1,400 feet	Worcester.
Asneconick; pond in Hubbardston	Worcester.
Assabet; brook tributary to Assabet River in Harvard and Stow	Marlboro.
Assabet; hill in Northboro; elevation, 454 feet	Marlboro.
Assabet; river, tributary to Concord River in eastern part of the State	Framingham.
Assawompsett; pond in Lakeville	Middleboro.
Assinippi; village in west part of South Scituate	Abington.
Assonet; village in Freetown	Taunton.
Assonet; bay in Freetown and Berkley	Taunton.
Assonet; river tributary to Taunton River in Lakeville	Taunton.
Assonet Neck; in town of Berkley	Taunton.
Asylum Station; station in northwestern part of Danvers, on Salem and Lawrence R. R	Salem.
Athol; town in Worcester County; area, 35 square miles	Winchendon. Warwick.
Athol; village in town of same name	Winchendon.
Athol Center; village in town of Athol	Winchendon.
Atlantic Station; station in Quincy on Old Colony R. R	Boston.
Attleboro; town in Bristol County; area, 28 square miles	Providence.
Attleboro; village in town of same name	Providence.
Auburn; town in Worcester County	Webster.
Auburn; village in town of same name	Webster.
Auburndale; village in Newton	Boston.
Auburnville; village in southwest part of Whitman	Abington.
Aucoot; cove in southern coast of Marion	New Bedford.
Averic Lake; in Stockbridge	Pittsfield.
Avery; brook tributary to *West Brook*	Hawley. Northampton.
***von**; town in Norfolk County; area, 4 square miles*	Dedham.

	Atlas sheets.
Ayer; town in Middlesex County; area, 12 square miles	Groton.
Ayers; village on boundary between Haverhill and Methuen	Haverhill.
Ayers; village in town of Lowell	Lowell.
Ayers; hill in Haverhill; elevation, 339 feet	Haverhill.
Ayers Junction; village in town of Ayer	Groton.
Babcock; brook in Princeton	Worcester.
Babery; hill in Townsend; elevation, 688 feet	Groton.
Babery Hill; brook in Townsend, tributary to Squannacook River	Groton.
Babylon; hill in Burlington; elevation, 240 feet	Boston.
Bachelder; brook in northern part of Rowley, tributary to Mill River	Salem.
Bachelor; brook flowing westerly through Grandy and South Hadley into Connecticut River.	Belchertown. Northampton.
Back; river in northwestern part of Bourne, flowing into Buzzards Bay	Falmouth.
Baddacook; brook in Groton	Groton.
Baddacook; pond in Groton	Groton.
Bad Luck; brook in Rehoboth	Taunton.
Bad Luck; mountain in Granville; altitude, 1,220 feet	Granville.
Bad Luck; pond in Douglas	Webster. Blackstone.
Bad Luck; swamp in Rehoboth	Taunton.
Bailey; brook in Gardner and Winchendon, tributary to Otter River	Winchendon.
Baiting; brook in Framingham	Framingham.
Baker; brook in town of Gardner	Fitchburg.
Baker; brook in Fitchburg and Leominster	Fitchburg.
Baker; island about 2 miles south of Manchester Harbor	Salem.
Baker; hill in north part of Hingham	Abington.
Baker; pond on boundary line between Brewster and Orleans	Wellfleet.
Baker; pond in Dennis	Yarmouth.
Bald; hill in Douglas; elevation, 700 feet	Blackstone.
Bald; hill in northeastern part of Beverly; elevation, 110 feet	Salem.
Bald; hill in southwestern part of Northampton; elevation, 840 feet	Northampton.
Bald; hill in Wrentham; elevation, 400 feet	Franklin.
Bald; hill on boundary line between Boylston and Northboro	Marlboro.
Bald; hill in Westminster; elevation, 1,220 feet	Fitchburg.
Bald; mountain in western part of Clarksburg	Greylock.
Bald; mountain in Charlemont; altitude, 1,375 feet	Hawley.
Bald; mountain in Shelbourne; altitude, 1,690 feet	Greenfield.
Bald; mountain in Bernardston; altitude, 1,167 feet	Greenfield.
Bald; mountain in Monson; altitude, 860 feet	Palmer.
Baldhead; hill in Lenox; elevation, 1,583 feet	Pittsfield.
Bald Pate; hill in Georgetown; elevation, 340 feet	Lawrence.
Bald Pate; hill in Newton; elevation, 300 feet	Boston.
Bald Pate; pond in northeastern part of Boxford	Lawrence. Salem.
Baldwin; pond in Wayland	Framingham.
Baldwinville; village in Templeton	Winchendon.
Ball Mountain; hill in Leyden; elevation, 1,197 feet	Greenfield.
Ballard; hill in Ashland; elevation, 360 feet	Framingham.
Ballard; hill in Lancaster; elevation, 465 feet	Marlboro.

	Atlas sheets.
Ballard; hill in Leicester; elevation, 920 feet	Webster.
Ballardville; village in Andover	Lawrence.
Ballville; village in Bolton, on Old Colony R. R	Marlboro.
Bancroft; brook in Pepperell, tributary to Robinson Brook	Groton.
Bancroft; hill in town of Gardner; elevation, 1,280 feet	Fitchburg.
Bancroft Station; village in northeastern part of Becket	Becket.
Ban Hill; pond in town of Harvard	Marlboro.
Banner; hill in Ashland; elevation, 320 feet	Framingham.
Baptist; village in Holyoke	Springfield.
Barber; hill in Gardner; elevation, 1,140 feet	Fitchburg.
Barber; hill in Warwick; elevation, 1,000 feet	Warwick.
Bardwell Ferry; village in town of Shelbourne	Greenfield.
Bardwell; ferry on Deerfield River in Shelbourne	Greenfield.
Bardwell; village in Belchertown	Palmer.
Barker; hill in Townsend; elevation, 781 feet	Groton.
Barkerville; village in Pittsfield	Pittsfield.
Barley Neck; peninsula on east coast of Orleans	Wellfleet.
Barnard; hill in Gill; elevation, 420 feet	Warwick.
Barnes; hill in Northboro	Marlboro.
Barnes; mountain in Tolland; altitude, 580 feet	Granville.
Barney; point in Wareham, on east side of Wareham River	Falmouth.
Barneyville; village in town of Swansea	Providence.
Barnstable; seacoast town in Barnstable County; area, 71 square miles	Barnstable.
Barnstable; village in town of same name	Barnstable.
Barnstable; harbor of Barnstable, opening into Cape Cod Bay	Barnstable.
Barr; rocks near the northeast shore of Scituate	Abington.
Barre; town in Worcester County; area, 57 square miles	Barre.
Barre; principal village in town of Barre	Barre.
Barre Falls; village in town of Barre	Barre.
Barre Plains; village in town of Barre on Ware River branch Boston and Albany R. R	Barre.
Barrett Junction; village in Belchertown on New London Northern and Springfield, Athol and North Eastern branch Boston and Albany R. R	Palmer.
Barrows; brook in Plympton and Kingston, tributary to Jones River Brook	Middleboro.
Barrowsville; village in Norton on Attleboro branch Old Colony R. R	Taunton.
Bartholomew; hill in western part of Ipswich; elevation 180 feet	Salem.
Bartholomew; pond in southern part of Peabody	Salem.
Bartlett; brook in Middleboro and Halifax	Middleboro.
Bartlett; brook in Methuen and Dracut	Lawrence.
Bartlett; hill in Shrewsbury; elevation, 673 feet	Marlboro.
Bartlett; pond in Northboro	Marlboro.
Bartlett; pond in Plymouth	Plymouth.
Bashan; hill in northwest part of Worthington	Chesterfield.
Bashbish; falls on Lee Pond Brook in western part of Mount Washington; elevation, 200 feet	Sheffield.
Bashbish; mountain in western part of Mount Washington; altitude, about 1,960 feet	
Basin; pond in southern part of Washington	Becket.

	Atlas sheets.
Basin Pond; brook in southern part of Washington and northern part of Lee	Becket.
Basle; brook in Hawley, flowing into King Brook	Hawley.
Bass; creek flowing into north side of Barnstable Harbor	Barnstable.
Bass; point on southwest coast of Nahant	Boston Bay.
Bass; pond in Springfield	Springfield.
Bass; reservoir in Warwick	Warwick.
Bass; river flowing south through Beverly, into Beverly Harbor	Salem.
Bass; river in southeastern part of Marshfield, tributary to Green Harbor	Duxbury.
Bass Hole; harbor at mouth of Chase Garden Creek	Yarmouth.
Bass Rocks; point on eastern coast of Gloucester	Gloucester.
Bassett; brook in northern part of Kingston, flowing into Blackwater Pond	Duxbury.
Bassett; island in eastern part of Buzzards Bay, between Red Brook and Pocasset Harbor	Falmouth.
Bassing; harbor lying north of Chatham	Chatham.
Bateman; pond in Concord	Framingham.
Batcheller; hill in North Brookfield; elevation, 920 feet	Barre.
Battlecock; hill in east part of Chesterfield	Chesterfield.
Batts; hill in Salisbury; elevation, 160 feet	Newburyport.
Bay State; village on Mill River	Northampton.
Bay View; village in northeastern part of Gloucester	Gloucester.
Beach; hill in Blandford; elevation, 1,500 feet	Granville.
Beach; hill, summit of Taconic Ridge in Hancock; altitude, 2,340 feet	Berlin.
Beach; hill on western boundary of Orange; elevation, 1,120 feet	Warwick.
Beach; point, the eastern extremity of Sandy Beach	Barnstable.
Beach Bluff Station; village in northeast part of Swampscott.	Boston Bay.
Beachmont; village on southeast coast of Revere	Boston Bay.
Beachwood; village in south part of Cohasset	Abington.
Beal; cove on east side of Weymouth Back River in northwest part of Hingham	Abington.
Beal Ledge; hills in Dighton; elevation, 140 feet	Taunton.
Beaman; hill in Gardner; elevation, 1,200 feet	Fitchburg.
Bean; railroad crossing in eastern part of Rowley	Salem.
Bean Porridge; hill in town of Westminster	Fitchburg.
Bear; hill in Waltham; elevation, 340 feet	Framingham.
Bear; hill in Topsfield; elevation about 140 feet	Salem.
Bear; hill in Reading; elevation, 220 feet	Lawrence.
Bear; hill in Westford; elevation, 340 feet	Lowell.
Bear; hill in Quincy; elevation, 500 feet	Dedham.
Bear; pond in south part of Nahant	Boston Bay.
Bear; river in Conway, tributary to Deerfield River	Greenfield.
Bear; hill in Merrimac; elevation, 240 feet	Haverhill.
Bear; hill in town of Milford; elevation, 410 feet	Blackstone.
Bear; hill in Hopkinton; elevation, 560 feet	Blackstone.
Bear; hill in Stoneham; elevation, 320 feet	Boston.
Bear Meadow; brook in New Hampshire and town of Ashburnham, Mass., tributary to Millers River	Fitchburg.
Bear Meadow; brook in Methuen	Lawrence.
Bear Meadow; brook in Reading	Lawrence.

	Atlas sheets.
Bear; mountain in Wendell; elevation, 1,280 feet	Warwick.
Bear; mountain in northeastern part of Great Barrington, altitude, 1,865 feet.	Pittsfield. Sheffield.
Bearden; brook in Montgomery	Granville.
Beaver; creek in northern part of Clarksburg, tributary to north branch of Hoosic River	Greylock.
Beaver; brook in East Bridgewater	Abington.
Beaver; brook in Bridgewater, flowing into Spring Brook	Middleboro.
Beaver; brook in Lexington and Waltham, tributary to Charles River	Boston.
Beaver; brook in eastern part of Williamsburg, tributary to Mill River	Northampton.
Beaver; brook in Royalston, flowing into Lawrence Brook	Winchendon.
Beaver; brook in Littleton and Westford	Lowell.
Beaver; brook in Royalston, flowing into Lawrence Brook	Winchendon.
Beaver; brook in Chelmsford	Lowell.
Beaver; brook in Harvard and Littletown	Groton.
Beaver; brook in Boxboro	Marlboro.
Beaver; brook in West Newbury and Newbury	Newburyport.
Beaver; brook in Enfield and Ware	Palmer. Belchertown.
Beaver; brook in Danvers, tributary to Crane River	Salem.
Beaver; pond in northern part of Beverly	Salem.
Beaver; pond in Lincoln	Framingham.
Beaver; pond in Franklin	Franklin.
Beaver; pond in Bellingham	Franklin.
Beaver Brook; village and railway station on the Salem and Lawrence R. R. in northwestern part of Danvers	Salem.
Beaver Meadow; village in Leyden	Greenfield.
Beaverdam; brook in Lynnfield, 2 miles long, tributary to Saugus River	Lawrence.
Beaverdam; brook in Ashland, Framingham, Sherborn, and Natick	Framingham.
Beaverdam; brook in Carver, 3 miles long, tributary to Weweantic River	Middleboro.
Beaverdam; pond in Wareham	Plymouth.
Beaverdam; pond in Plymouth	Plymouth.
Beck; pond in southeastern part of Hamilton	Salem.
Becket; town in eastern part of Berkshire County; area, 48 square miles	Becket.
Becket; mountain in western part of Becket; altitude, 2,200 feet	Becket.
Becket Center; village and post-office in Becket	Becket.
Bedford; town in Middlesex County; area, 15 square miles	Framingham. Lowell.
Bedford; village in Bedford on Boston and Lowell R. R.	Framingham.
Bedford Station; village in Bedford on Boston and Lowell R. R	Framingham.
Bedlam; brook in Blandford, Hampden County, 2 miles long, and tributary to Pebble Brook	Granville.
Bee; hill in Leominster	Marlboro.
Beech; hill in south part of Rockland	Abington.
Beech; hill on boundary line between Gardner and Westminster; elevation, 1,160 feet	Fitchburg.

	Atlas sheets.
Beech; hill in Salisbury, Essex County; elevation, 200 feet	Newburyport.
Beech Hill Meadows; name applied to small tract in south part of Rockland	Abington.
Beer Mountain; hill in Northfield; altitude, 940 feet	Warwick.
Beer Plain; in western part of Northfield, on New London Northern R. R	Warwick.
Belchertown; town in Hampshire County; area, 54 square miles.	Belchertown. Palmer.
Belchertown; village in town of same name, on New London Northern R. R	Belchertown
Bell; brook in Oakham, New Braintree and Barre, 3 miles long.	Barre.
Belle; inlet on northwest boundary of Winthrop	Boston Bay.
Belleville; village in eastern part of New Bedford	New Bedford.
Bellevue; hill in Boston; elevation 320 feet	Boston.
Bellingham; town in Norfolk county; area 19 square miles	Franklin.
Bellingham; village in town of same name	Franklin.
Bellows; hill in Carlisle; elevation 260 feet	Lowell.
Bellows; hill in Shelburne; elevation 920 feet	Greenfield.
Belmont; town in Middlesex County; area 5 square miles.	Boston.
Belmont; village in town of same name, on Massachusetts Central R. R	Boston.
Benjamin; hill in Winchendon	Winchendon.
Bennett; brook in Northfield	Warwick.
Bennett; brook in Harvard, Ayer and Littleton; 4 miles long	Groton.
Bennett Neck; narrow, irregularly shaped island in northern part of Buzzards Bay about five-eighths of a mile long, and trending north and south	Falmouth.
Benson; pond in Middleboro	Middleboro.
Benton; hill in northern part of Becket; elevation 1,740 feet	Becket.
Berkley; town in Bristol county; area 17 square miles	Taunton.
Berkley; village in town of same name	Taunton.
Berkley; bridge across Taunton River, in Berkley and Taunton.	Taunton.
Berkshire; village in southeastern part of Lanesboro	Greylock.
Berlin; town in Worcester county; area 14 square miles	Marlboro.
Berlin; village in town of same name	Marlboro.
Bernardston; town in Franklin county; area 22 square miles	Greenfield.
Bernardston; village in town of same name, on Connecticut River	Greenfield.
Beverly; seaboard town in southeastern part of Essex county; area 20 square miles	Salem.
Beverly; village in southern part of town of same name, on Beverly Harbor	Salem.
Beverly; cove in southern coast of town of Beverly	Salem.
Beverly; harbor, an arm of the sea indenting southeastern coast of Essex County, between Beverly and Salem	Salem.
Beverly; reservoir on a hill about 160 feet high in northern part of Beverly	Salem.
Beverly Farms; village in southeastern part of Beverly	Salem.
Bickford; hill in town of Gardner: elevation, 1,260 feet	Fitchburg.
Big; brook in Hampden and Wilbraham, 3 miles long, flowing into Scantic Brook	Palmer.
Big Sandy; pond in Yarmouth	Yarmouth.
Bigelow; brook in Phillipston and Petersham	Winchendon.
Billerica; town in Middlesex County; area, 27 square miles	Lowell. Lawrence.

	Atlas sheets.
Billerica; village in town of same name on Boston and Lowell R. R.; Billerica branch	Lowell.
Billerica; station on Boston and Lowell R. R., in Billerica	Lawrence.
Billerica Spring; station in Bedford, on Boston and Lowell R. R.; Billerica branch	Lowell.
Billings; pond in Sharon	Dedham.
Billingsgate; island on west shore, at entrance to Wellfleet Harbor, in Cape Cod Bay	Wellfleet.
Billingsgate; light-house on southeast extremity of Billingsgate Island, in Cape Cod Bay	Wellfleet.
Billington Sea; pond in northern part of Plymouth, which was discovered by Billington, of the Mayflower, for whom it was named	Plymouth.
Birch; brook in Norton and Rehoboth, tributary to Three Mile River; is 4 miles long	Taunton.
Birch; hill in Stow; elevation 380 feet	Marlboro.
Birch; hill in Winchendon	Winchendon.
Bird Island; light-house on Bird Island, in Buzzards Bay, at east entrance of Sippican Harbor	Falmouth.
Birch; pond in Saugus and Lynn; Essex County	Boston. Boston Bay.
Birds; hill in Needham; elevation, 220 feet	Boston.
Bishop and Clerks; a 4-second order flashing white light in tower, on Bishop and Clerks Ledge, 2¼ miles south-southeast from Point Gammon. Lantern 59 feet above sea level; visible 13 miles	Barnstable.
Bixby; reservoir in Townsend	Groton.
Black; brook in East Bridgewater	Abington.
Black; brook tributary to Ipswich River, in Hamilton	Salem.
Black; brook in Middleboro and Rochester, tributary to Great Quitticas Pond; is 5 miles long	Middleboro.
Black; brook in town of Easton	Dedham.
Black; brook in Dunstable, tributary to Salmon river	Lowell.
Black; brook in Blandford and Montgomery, 4 miles long, tributary to Westfield River	Granville.
Black; brook in West Springfield, tributary to Westfield River, and 4 miles long	Springfield.
Black; creek in Quincy	Boston Bay.
Black; pond in northern part of South Scituate	Abington.
Black; pond in Plymouth	Plymouth.
Black; pond in Granville	Granville.
Black; pond in Harvard	Groton.
Black Betty; brook in Brockton and West Bridgewater, flowing into West Meadow Brook. Is 3 miles long	Dedham.
Black Pond; hill in northern part of South Scituate	Abington.
Black Pond; swamp in the northern part of South Scituate,	Abington.
Black Rock; island north of Cohasset	Boston Bay.
Black Rock; creek in Salisbury	Newburyport.
Blackburn; village in Ashburnham	Fitchburg.
Blackfish; creek in Wellfleet, flowing into Wellfleet Harbor	Wellfleet.
Blackington; village in northeastern part of Williamstown, on the Hoosic River	Greylock.
Blackmore; pond in Wareham	Middleboro.
Black Point; pond in town of Chilmark, Marthas Vineyard	Marthas Vineyard.
Blackstone; village in town of the same name	Blackstone.

	Atlas sheets.
Blackstone; town in Worcester county; area 17 square miles.	Blackstone.
Blackstone; river in southern part of the State, tributary to Providence River.	Blackstone. Webster.
Blackwater; pond in northeastern part of Kingston	Duxbury.
Blake; hill in southwest part of Sturbridge; elevation 1,060 feet	Brookfield.
Blake; hill in Westford; elevation 360 feet	Lowell.
Blanchard; hill in northern part of Brookfield; elevation 800 feet	Brookfield.
Blanchard; hill in Dunstable; elevation 360 feet	Groton.
Blanchardville; village in town of Palmer, on Boston and Albany R. R	Palmer.
Blandford; town in Hampton county; area 55 square miles	Granville.
Blandford; village in town of Blandford	Granville.
Blankenships; cove in Sippican Harbor, between Sippican Neck and Planting Island, on southern coast of Marion	Falmouth.
Blair; pond in Blandford	Granville.
Blish; point in northern part of Barnstable, extending into Barnstable Harbor	Barnstable.
Bliss; brook in Rehoboth	Providence.
Block; brook in West Springfield, tributary to Westfield River, 3 miles long	Springfield.
Blodgett Mill; brook in Warren and Brimfield, tributary to Chicopee River	Palmer.
Blood; hill on boundary between Ashby and Ashburnham	Fitchburg.
Blood; pond in Charlton and Dudley	Webster.
Bloody; brook tributary to Mill River, in southern part of Deerfield	Northampton.
Bloody; brook in Methuen and Lawrence, tributary to Spickett River	Lawrence.
Bloody; pond in Plymouth	Plymouth.
Blue, Mount; hill in north part of South Scituate	Abington.
Blue Hills; range of hills in Dedham, Milton, and Quincy. Altitude from 300 to 600 feet	Dedham.
Blueberry Peak; hill in Charlemont. Elevation 1,695 feet	Hawley.
Bluefield; brook in New Hampshire and town of Ashburnham, 3 miles long	Fitchburg.
Bluefish; marshy brook in eastern part of Duxbury	Duxbury.
Bluefish; point extending into Katama Bay, on coast of Edgartown, Marthas Vineyard	Marthas Vineyard.
Boat Meadow; river in town of Eastham, flowing into Cape Cod Bay	Wellfleet.
Boggistere; brook in Sherborn and Millis	Franklin.
Bolster; hill in Warwick; elevation, 1,160 feet	Warwick.
Bolton; town in Worcester County; area, 19 square milese	Marlboro.
Bolton; village in town of same name	Marlboro.
Bolton Cedar; swamp in southeastern part of Freetown on line of New Bedford.	Middleboro. New Bedford.
Bond; hill in Millbury; elevation, 520 feet	Webster.
Bond; village in Palmer	Palmer.
Bonney; hill in central part of Hanson	Abington.
Boon; hill in Stow; elevation, 360 feet	Marlboro.
Boon; pond in Stow	Marlboro.
Boot; pond in Plymouth	Plymouth.

	Atlas sheets.
Booth; hill in west part of Scituate	Abington.
Borden; brook in Blandford and Granville, tributary to Westfield Little River; four miles long	Granville.
Boston; city in Suffolk County; area, 42 square miles	Boston.
Boston and Albany; a railroad running westward from Boston to Albany, N. Y., with numerous branches and feeders.	
Boston and Lowell; part of the Boston and Maine R. R. system.	
Boston and Maine; railroad running northward and westward from Boston and, with its many branches, covering nearly all of northeastern Massachusetts.	
Boston and Providence; railroad system in southeastern Massachusetts, connecting Boston with Providence, Fall River, New Bedford, and other points.	
Boston Bay; a subdivision of Massachusetts Bay, situated at its western end and included between Nahant Head and Strawberry Point. Between these limits it is 11 miles wide and makes into the land for a distance of 4 miles	Boston Bay.
Boston; brook in Andover, North Andover, and Middleton, tributary to Ipswich River, and is 8 miles long	Lawrence.
Boston; harbor between Deer Island and Point Allerton; is 3¼ miles wide	Boston.
Boston; hill on eastern boundary of Shrewsbury; elevation, 560 feet	Marlboro.
Boston; hill in North Andover; elevation, 380 feet	Lawrence.
Boston; light-house, on Little Brewster Island	Boston Bay.
Boston, Salem and Nashua; a part of the Boston and Maine R. R. system.	
Bottomless; pond in Sudbury	Framingham.
Bottomly; pond in town of Paxton	Worcester.
Bound; brook in southeast part of Cohasset	Abington.
Bound; pond in southeastern part of Hamilton, having an outlet into Chebacco Lake	Salem.
Bound Brook; island in Wellfleet and Truro	Wellfleet.
Bourne; town in Barnstable County, on eastern shore of Buzzards Bay; area, 44 square miles.	Falmouth. Plymouth.
Bourne; cove, an arm of Buzzards Bay, extending about one-half-mile northwestwardly into the southern coast of Wareham	Falmouth.
Bourne; hill in southeast of Sandwich village; elevation about 280 feet	Barnstable.
Bourne; hill in southern part of Wareham, between Crooked River and the bay; elevation about 100 feet	Falmouth.
Bourne Neck; low neck of land between Cohasset Narrows and Monumet River, in Bourne	Falmouth.
Bournedale; village in Bourne	Plymouth.
Bow; brook in Shirley and Lancaster, 1 mile long	Groton.
Bowen; pond (salt) in southern part of Falmouth, opening into Vineyard Sound	Falmouth.
Bowenville; village in northern part of city of Fall River, on Franklin River	Fall River.
Bower; brook in Harvard and Bolton	Groton. Marlboro.
Bowerman; creek, tributary to Hoosic River in southeastern part of North Adams	Greylock.

	Atlas sheets.
Bowman; pond in southern part of Falmouth	Falmouth.
Boxboro; town in Middlesex County; area 12 square miles	Marlboro. Framingham.
Boxboro; village in town of same name	Marlboro.
Boxford; town in central part of Essex County; area 24 square miles.	Lawrence. Salem.
Boxford; village in southern part of Boxford	Salem.
Boxford; railway station in eastern part of Boxford	Salem.
Boyce; brook in Royalston	Winchendon.
Boylston; town in Worcester County; area 20 square miles	Marlboro. Worcester.
Boylston; part of the city of Boston, Suffolk County	Boston.
Boylston; village in town of Boylston, on Massachusetts Central R. R	Marlboro.
Boylston Center; village in town of Boylston	Marlboro.
Boylston Common; village in West Boylston on Fitchburg and Worcester R. R	Worcester.
Bozrah; brook in Charlemont and Hawley, tributary to Deerfield River; is 3 miles long	Hawley.
Brace; cove on eastern coast of East Point, in Gloucester	Gloucester.
Bradford; town in Essex County; area 7 square miles	Haverhill. Lawrence.
Bradford; village in town of same name, Boston and MaineR. R.	
Bradford Branch; brook tributary to East Branch of Mill River, in Williamsburg	Northampton.
Bragg; hill in town of Granby; elevation, 520 feet	Palmer.
Braggville; village in Holliston	Franklin.
Braintree; town in Norfolk County; area, 15 square miles	Dedham. Abington.
Braley Station; railway station in southeastern part of Freetown	New Bedford.
Branch, The; stream in east part of Chesterfield	Chesterfield.
Branch; creek, tributary to North River in northeastern part of Marshfield	Duxbury.
Brandy Brow; hill on boundary between Haverhill and Merrimac; elevation, 238 feet	Haverhill.
Brant; hill in Berkley	Taunton.
Brant; island in Nasketucket Bay, south of Mattapoisett Neck.	New Bedford.
Brant Point; light-house on north coast of Nantucket at entrance to Nantucket Harbor	Nantucket.
Brant Rocks; small rocky islet near eastern shore of Marshfield	Duxbury.
Brayton; point on southern coast of Somerset in Mount Hope Bay	Fall River.
Braytonville; village in northwestern part of North Adams on Hoosic River	Greylock.
Bread and Cheese; brook tributary to East Branch of Westport River in northern part of Westport	Fall River.
Breakneck; right branch of Quineboag River, in Sturbridge.	Brookfield,
Breakneck; hill in southwest part of Westhampton	Chesterfield.
Breakneck; hill in Freetown; elevation, 120 feet	Taunton.
Breed; hill on an island northeast of East Boston; elevation 140 feet	Boston.
Breed; island northwest of Winthrop	Boston Bay.

	Atlas sheets.
Breed; pond near central part of Lynn	Boston Bay.
Brewster; town in Barnstable County; area, 27 square miles	Yarmouth. Wellfleet.
Brewster; village in town of same name	Wellfleet.
Briar; pond in Harwick	Yarmouth.
Bridge; brook in Sudbury	Framingham.
Bridge; creek flowing from Great Marshes into Barnstable Harbor	Barnstable.
Bridge Meadow; brook in Tyngsboro and Westford; 4 miles long	Lowell.
Bridgewater; town in Plymouth County; area 29 square miles.	Middleboro. Abington. Taunton.
Bridgewater; village in town of same name on Old Colony R. R	Middleboro.
Briggs; pond in Harwich	Yarmouth.
Briggsville; village in town of Attleboro	Providence.
Briggsville; village in southern part of Clarksburg	Greylock.
Brigham; hill in town of Grafton; elevation, 600 feet	Blackstone.
Brighton; village in Boston, on Boston and Albany R. R	Boston.
Brightwood; village in Springfield, on Connecticut River R. R.	Springfield
Brimfield; town in Hampden County; area, 35 square miles	Brookfield. Palmer.
Brimfield; principal village in town of same name	Brookfield.
Brimstone; hill in Ware; elevation, 860 feet	Belchertown.
Brimstone; hill in Shelburne; elevation, 840 feet	Greenfield.
Britaniaville; village in Taunton, on main line of Old Colony R. R	Taunton.
Broad; brook in Belchertown and Ludlow; 5 miles long	Palmer.
Broad; brook, tributary to Mill River, in southwestern part of Hatfield	Northampton.
Broad; brook in Southampton and Holyoke	Springfield.
Broad; cove in Dighton, opening into Taunton River	Taunton.
Broad; cove opening into Hingham Harbor, on coast of Hingham	Abington.
Broad; creek in Nantucket	Muskeget.
Broad Creek; branch of North River, in northeastern part of Marshfield	Duxbury.
Broad; hill in Natick; elevation, 300 feet	Framingham.
Broad Meadow; brook in Worcester and Millbury	Webster.
Broad Meadow; brook in Marlboro and Southboro	Marlboro.
Brockton; city in Plymouth County; area, 21 square miles	Dedham.
Brockton; village in Brockton, on Old Colony R. R	Dedham.
Brockton; reservoir in Stoughton	Dedham.
Brockton Heights; village in town of Brockton	Dedham.
Bromps; pond in Plymouth	Plymouth.
Bronson; brook in north part of Worthington	Chesterfield.
Brook; pond on boundary of Oakham, New Braintree, North Brookfield and Spencer	Barre.
Brook; village in Templeton	Winchendon.
Brookfield; town in Worcester County; area, 26 square miles	Brookfield.
Brookline; village in town of same name, on Boston and Albany R. R., Brookline branch	Boston.
Brookline; town in Norfolk County; area, 7 square miles	Boston.

	Atlas sheets.
Brookside; station in Westford, on Stony Brook R. R.	Lowell.
Brown; brook in Webster, tributary to Lake Chaubunagungamaug	Webster.
Brown; hill in town of Ayer; elevation, 442 feet	Groton.
Brown; hill in Ashburnham; elevation, 1,320 feet	Fitchburg.
Brown; hill in Fitchburg; elevation, 1,180 feet	Fitchburg.
Brown; pond in south part of Peabody	Boston Bay.
Brown; pond at southern point of boundary line between Salem and Peabody	Salem.
Brown; pond on western boundary of Templeton	Winchendon.
Brown Loaf; hill in Groton; elevation, 448 feet	Groton.
Browning; pond in Spencer	Worcester.
Brush; hill in Sherborn; elevation, 400 feet	Framingham.
Brush; hill in western part of New Marlboro; elevation about 1,420 feet	Sheffield.
Brush; mountain in Northfield, on the New London Northern R. R.; elevation, 1,580 feet	Warwick.
Brush; valley in Warwick	Warwick.
Bryant Neck; in Freetown	Taunton.
Bryantville; village in western part of Pembroke	Abington.
Buck; hill in town of North Brookfield; elevation, 880 feet	Barre.
Buck; hill in Lexington; elevation, 200 feet	Boston.
Buck; river tributary to Farmington River, flowing southeasterly through Sandisfield	Sandisfield.
Buckland; town in Franklin County; area, 21 square miles	Hawley.
Buckland; village in town of same name	Hawley.
Buckland Four Corners; village in town of Buckland	Hawley.
Buckman; brook in Athol, flowing into Millers River; 2 miles long	Winchendon.
Buckmaster; pond in Dedham, Norfolk County	Dedham.
Buddock; brook in Buckland, tributary to Clesson Brook	Hawley.
Buel; lake, containing 344 acres, on boundary line between Monterey and New Marlboro	Sheffield.
Bull; brook tributary to Rowley River, in northern part of Ipswich	Salem.
Bullardville; village in town of Winchendon	Winchendon.
Bumkin; island west of Hull, in Boston Bay	Boston Bay.
Bummet; brook in Shrewsbury and Northboro; 2 miles long	Marlboro.
Bump; hill in Dracut; elevation, 160 feet	Lowell.
Bungay; river in Attleboro and North Attleboro	Providence.
Bungy; hill in Montgomery; elevation, 1,400	Granville.
Bunyan; mountain in town of Monson; altitude, 780 feet	Palmer.
Burbank; pond in Woburn	Boston.
Burges; pond in Westford	Lowell.
Burkville; village in Conway	Greenfield.
Burlington; town in Middlesex County; area, 13 square miles	Boston.
Burlington; village in town of same name	Lawrence.
Burn; hill in Westford; elevation, 340 feet	Lowell.
Burn; hill in Dracut; elevation, 260 feet	Lowell.
Burncoat; brook in Leicester; 1 mile long	Webster.
Burncoat; pond in Leicester and Spencer	Webster.
Burnett; pond in north part of Chesterfield	Chesterfield.
Burnshirt; river in Templeton, Hubbardston and Barre	Barre.

	Atlas sheets.
Burnt Plain; swamp near central part of South Scituate	Abington.
Burnt Swamp; corner in State boundary in Wrentham, Norfolk.	Franklin.
Burrill; hill in western part of Lynn	Boston Bay.
Burrow; brook in Oakham and Barre; 3 miles long	Barre.
Burtts Crossing; station on Salem and Lowell R. R	Lawrence.
Bush; hill in Merrimac; elevation, 260 feet	Haverhill.
Bush; hill in central part of Ipswich; elevation, 140 feet	Salem
Bush; mountain in Leverett; elevation, 1,260 feet	Belchertown.
Bushnell; mountain in southern part of Egremont, on the line of Sheffield; altitude, 1,868 feet	Sheffield.
Bute; brook in Lakeville, tributary to Assawompsett pond	Middleboro.
Butler; point at extreme southern end of Sippican Neck, in town of Marion	Falmouth.
Butlerville; village in town of Wilbraham	Palmer.
Buttonwood; brook in Dartmouth, flowing into Apponagansett Harbor	New Bedford.
Buttonwood; hill in east part of South Scituate	Abington.
Buxton; brook, tributary to West Brook, in northeastern part of Williamstown	Greylock.
Byfield; village in Newbury on Boston and Maine R. R., Newburyport branch	Newburyport.
Buzzards; bay on southern coast of Massachusetts, between the mainland on the west, Cape Cod on the east, and Elizabeth Islands on the south. It is about 20 miles long, with an average width of about 5 miles and has deep water throughout.	Gay Head. New Bedford. Falmouth.
Cadwell; creek in Enfield, Pelham, and Belchertown flowing into Swift River; 3 miles long	Belchertown.
Cady; brook tributary to Quinebaug River in Charlton and Southbridge.	Webster. Brookfield.
Cady; small pond in Groton	Groton.
Cahoon Hollow; life-saving station on east coast of Wellfleet	Wellfleet.
Calves Pasture; pond north of Barnstable, connecting with Barnstable Harbor	Barnstable.
Cambridge; city in Middlesex County; area, 7 square miles	Boston.
Cambridgeport; village in city of Cambridge	Boston.
Campello; village in Brockton on Old Colony R. R	Dedham.
Canapitsett Gut; passage between the islands of Nashawena and Cuttyhunk, Gosnold	Gay Head.
Candlewood; hill in Blackstone; elevation 300 feet	Blackstone.
Canesto; brook in Hubbardston and Barre; is 7 miles long	Barre.
Canesto; brook in Templeton and Hubbardston	Winchendon.
Canoe; river in Bristol County, tributary to Taunton River	Taunton. Dedham.
Cannonville; village in southern part of Mattapoisett	New Bedford.
Cannonville; village in western part of New Bedford	New Bedford.
Canton; town in Norfolk County; area, 19 square miles	Dedham.
Canton ; village in town of same name on Boston and Providence R. R., Stoughton branch	Dedham.
Canton Junction; village in town of Canton at junction of Boston and Providence R. R. and Stoughton branch	Dedham.
Cape; pond in Rockport	Gloucester.

	Atlas sheets.
Cape Cod; a peninsula forming the southeastern part of Massachusetts and constituting the southern and eastern limits of Cape Cod Bay; its surface is, in the main, low and sandy and dotted with numerous ponds. Politically it constitutes Barnstable County.	Provincetown. Wellfleet. Chatham. Yarmouth. Barnstable.
Cape Cod; bay having the peninsula of Cape Cod on the east and south, and the mainland of Massachusetts on the west.	Plymouth. Barnstable. Yarmouth. Wellfleet. Provincetown.
Cape Poge; light-house on Cape Poge, Chappaquiddick Island, in Edgartown, Marthas Vineyard	Marthas Vineyard.
Cape Poge; bay on coast of Chappaquiddick Island in Edgartown, Marthas Vineyard, opening into Edgartown Harbor	Marthas Vineyard.
Captain; hill on a peninsula in southeastern part of Duxbury; elevation, about 200 feet	Duxbury.
Carlisle; town in Middlesex County; area, 16 square miles	Lowell.
Carlisle; village in town of same name	Lowell.
Carlisle Station; village on Framingham and Lowell R. R., in town of Carlisle	Lowell.
Carmel; hill in Andover; elevation, 240 feet	Lawrence.
Carpenter; brook in Rehoboth	Providence.
Carpenter; hill in Charlton; elevation, 865 feet	Webster.
Carr; island in Merrimac River	Newburyport.
Carter; hill in Leominster; elevation, 700 feet	Fitchburg.
Carver; town in Plymouth County; area, 40 square miles	Plymouth. Middleboro.
Carver; village in town of same name	Middleboro.
Caryville; village in Bellingham, on New York and New England R. R., Woonsocket division	Franklin.
Castle; hill in eastern part of Ipswich; elevation, about 140 feet	Salem.
Castle; hill in Saugus; elevation, 280 feet	Boston.
Castle; hill in Medfield; elevation, 240 feet	Franklin.
Castle Neck; a low, sandy peninsula on eastern extremity of Ipswich.	Salem. Gloucester.
Castle Neck; marshy river in eastern part of Essex County, tributary to Essex River	Salem.
Catacoonamug; brook in Lunenburg; 3 miles long	Groton.
Catamount; hill in Coleraine; elevation, 1,220 feet	Greenfield.
Cataumet; village in southwestern part of Bourne	Falmouth.
Cataumet; harbor on the western shore of Falmouth	Falmouth.
Cattle; pond in Plymouth	Plymouth.
Cedar; mountain on line between New York and Mount Washington; altitude, about 1,820 feet	Sheffield.
Cedar; point on eastern coast of Scituate	Duxbury.
Cedar; cove on southern coast of Gardeners Neck, Swansea	Fall River.
Cedar; hill in western part of Lynn	Boston Bay.
Cedar; hill in Waltham; elevation, 240 feet	Boston.
Cedar; pond draining into Quineboag River in Sturbridge	Brookfield.
Cedar; pond in Wareham	Plymouth.
Cedar; pond in the southwestern part of Peabody, drained by Goldthwait Brook	Salem.
Cedar; pond in western part of Wenham	Salem.

	Atlas sheets.
Cedar; pond in Orleans	Wellfleet.
Cedar; pond in Dennis	Yarmouth.
Cedar; pond in Lakeville	Middleboro.
Cedar; pond in north part of Lynn	Boston Bay.
Cedar; pond in Boxford	Lawrence.
Cedar; pond in northwestern Falmouth	Falmouth.
Cedar; swamp in town of Gardner	Fitchburg.
Cedar; swamp in central part of Mattapoisett	New Bedford.
Cedar Swamp; mountain in town of Monson; altitude, 1,100 feet	Palmer.
Cedar Swamp; brook in Middleboro and Rochester	Middleboro.
Cedar Meadow; pond in Leicester	Webster.
Cedar Swamp; pond in Webster	Marlboro.
Cedar Swamp; pond in Milford	Blackstone.
Cedar Swamp; river in Lakeville	Middleboro.
Cedar Tree Neck; point on coast of Tisbury, Marthas Vineyard	Gay Head.
Center; pond near central part of Becket	Becket.
Center; creek in Upton, tributary to West River	Blackstone.
Center Hill; point on coast of Plymouth	Plymouth.
Center Hill; pond in Plymouth	Plymouth.
Centerville; village in south part of Barnstable	Barnstable.
Centerville; village in town of Uxbridge	Blackstone.
Central; village in central part of Westport	Fall River.
Central; station on Boston and Providence R. R., in city of Boston	Boston.
Centralville; village in Lowell	Lowell.
Chaffinville; village in Holden, on Boston, Barre and Gardner R. R.	Worcester.
Chamberlain; mountain in eastern part of Brimfield; altitude, 1,020 feet	Brookfield.
Chandler; island in entrance to Hingham Harbor	Boston Bay.
Chandler; pond in Boston	Boston.
Chapin; pond in Ludlow	Palmer.
Chaplinville; village in southeastern part of Rowley	Salem.
Chappaquiddick; island which forms part of Edgartown, Marthas Vineyard	Marthas Vineyard.
Chappaquonsett; pond in Tisbury, Marthas Vineyard	Marthas Vineyard.
Charge; pond in southern part of Plymouth	Plymouth.
Charlemont; town in Franklin County; area, 24 square miles	Hawley.
Charlemont; village in town of Charlemont	Hawley.
Charles; small brook tributary to the Quineboag River in Brimfield	Brookfield.
Charles; river in Middlesex and Norfolk counties; is about 40 miles long and flows into Boston Harbor.	Framingham. Blackstone. Boston.
Charles River; village in Needham	Framingham.
Charlestown; part of the city of Boston, on north bank of Charles River	Boston.
Charlton; town in Worcester County; area, 46 square miles	Webster. Brookfield.
Charlton; village in town of same name	Webster.
Charlton City; village in town of Charlton	Webster.

	Atlas sheets.
Charlton Depot; village in town of Charlton, on Boston and Albany R. R	Webster.
Charltonville; village in northern part of Plymouth	Plymouth.
Chartley; brook in Attleboro	Taunton.
Chase Garden; brook on boundary between Dennis and Yarmouth, Barnstable County	Yarmouth.
Cheese Cake; creek in Newton, tributary to Charles River; 3 miles long	Boston.
Chelmsford; town in Middlesex County; area, 24 square miles.	Lowell.
Chelmsford Center; village in town of Chelmsford, on Framingham and Lowell R. R	Lowell.
Chelsea; city in Suffolk County; area, 3 square miles	Boston.
Chelsea; creek in southeast part of Saugus	Boston Bay.
Chene; brook in Orange	Warwick.
Cherry; hill in southern part of Wenham; elevation, 160 feet	Salem.
Cherry; brook in Weston	Framingham.
Cherry Brook; station on Massachusetts Central R. R. in Weston	Framingham.
Cherry Valley; village in Leicester	Webster.
Cheshire; town in northern part of Berkshire County; area, 28 square miles	Greylock.
Cheshire; village in central part of town of same name	Greylock.
Cheshire; branch of Fitchburg R. R., running from South Ashburnham northwestward into New Hampshire.	
Chaseville; village in Dudley, on New York and New England R. R., Southbridge branch	Webster.
Chatham; seacoast town on Cape Cod, Barnstable County; Indian name, Monomoy; area, 17 square miles.	Yarmouth. Chatham.
Chatham; principal village in Chatham, Barnstable County; lies on the bluff facing Chatham Harbor	Chatham.
Chatham; harbor of Chatham Village, separating the main land from Nauset Beach	Chatham.
Chatham lights; two iron towers, 100 feet apart, in Chatham Village, with fourth-order, fixed, white lights; lanterns 80 feet above sea level; visible 14 miles	Chatham.
Chatham Port; village in Chatham	Chatham.
Chaubungungamaug; lake in Webster	Webster.
Chauncey; pond in Webster	Marlboro.
Cheapside; village in town of Deerfield, on Fitchburg R. R.	Greenfield.
Chebacco; lake in Essex County, on the boundary line between Hamilton and Essex	Salem.
Cheesboro; creek, tributary to Hoosic River, in northeastern part of Adams	Greylock.
Cheshire Harbor; village in northern part of Cheshire	Greylock.
Chester; town in Hampden County; area, 38 square miles	Chesterfield. Granville.
Chester; principal village in town of same name, on Boston and Albany R. R	Chesterfield.
Chester Center; village in Chester, on Boston and Albany R. R.	Chesterfield.
Chesterfield; town in Hampshire County; area, 32 square miles.	Chesterfield.
Chesterfield Hollow; village in west part of Chesterfield	Chesterfield.
Chestnut; hill in Orange	Warwick.
Chestnut; hill in Montague; elevation, 1,460 feet	Warwick.
Chestnut; hill in Warwick; elevation, 1,020 feet	Warwick.
***Chestnut**; hill in northern part of* Hatfield, on line of Franklin *County; elevation, about 760 feet*	Northampton.

	Atlas sheets.
Chestnut; hill in Athol	Winchendon.
Chestnut; hill in Tolland	Granville.
Chestnut; hill in Newton; elevation, 280 feet	Boston.
Chestnut; hill in town of Grafton; elevation, 660 feet	Blackstone.
Chestnut; hill in Chelmsford; elevation, 360 feet	Lowell.
Chestnut; hills in Groton; elevation, 400 to 560 feet	Groton.
Chesnut Hill; reservoir in Newton and Boston	Boston.
Chickabut; hill in Quincy; elevation, 500 feet	Dedham.
Chickley; river in Charlemont, Hawley and Savoy, tributary to Deerfield River	Hawley.
Chicopee; town in Hampden County; area, 26 square miles	Springfield.
Chicopee; village in town of same name, on Connecticut River R. R	Springfield.
Chicopee; mountain in Monson; altitude, 800 feet	Palmer.
Chicopee; river; left branch of Connecticut River, in central part of State.	Palmer. Springfield.
Chicopee Falls; village in town of Chicopee	Springfield.
Child; river in Barnstable County, draining John Pond into Waquoit Bay	Falmouth.
Child; brook in south part of Cummington	Chesterfield.
Chilmark; town in Dukes County; area, 21 square miles	Marthas Vineyard. Gay Head.
Chilmark; village in town of same name; on Marthas Vineyard.	Gay Head.
Chilmark; pond in town of Chilmark; on Marthas Vineyard.	Gay Head. Marthas Vineyard.
Chochechiwick; river in North Andover, connecting Great Pond with Merrimac River	Lawrence.
Chockalog; pond in Uxbridge	Blackstone.
Christian; hill on southern boundary of Dracut; elevation, 300 feet	Lowell.
Christian; hill in Coleraine; elevation, 1,500 feet	Hawley. Greenfield.
Christian; hill in central part of Great Barrington; elevation, about 940 feet	Sheffield.
Chubb; island south of Manchester, at west entrance to Manchester Harbor	Salem.
Church; hill in northeastern part of Otis; elevation, 1,845 feet.	Sandisfield.
Church; hill in Templeton; elevation, 1,160 feet	Winchendon.
City Mills; village in Norfolk, on New York and New England R. R., main line	Franklin.
City Point; eastern point of South Boston	Boston.
Clam; brook in Westfield, 3 miles long	Springfield,
Clam; river; tributary to Farmington River, flowing southerly through Sandisfield	Sandisfield.
Clam Pudding; pond in Plymouth	Plymouth.
Clam Shell; pond in town of Clinton	Marlboro.
Clapp; pond in western part of Washington	Becket.
Clapp; pond in Provincetown	Provincetown.
Clarendon; hill in northern part of Somerville	Boston.
Clarendon Hills; village in Hyde Park on Boston and Providence R. R	Boston.
Clark; brook in Buckland and Ashfield	Hawley.
Clark; cove, arm of Buzzards Bay projecting into the southern part of Bristol County between Clark Neck and Dartmouth.	New Bedford.

	Atlas sheets.
Clark; island on eastern side of entrance to Duxbury Bay.....	Duxbury.
Clark; point on southern coast of New Bedford between Clark Cove and New Bedford Harbor..............................	New Bedford.
Clark; reservoir in Sutton..................................	Blackstone. Webster.
Clark Point; a fifth order, fixed white light on southern extremity of New Bedford at west entrance to New Bedford Harbor; lantern 68 feet above sea level and visible 13 miles.	New Bedford.
Clarksburg; town in Berkshire County; area, 13 square miles.	Greylock.
Clay Pit; brook in Lowell, two miles long, flowing into Merrimac River	Lowell.
Clear; pond in Carver...	Plymouth.
Clear; pond in northern part of Plymouth....................	Plymouth.
Clear; pond in Lakeville..	Middleboro.
Clear Run; brook in Seekonk and Rehoboth, 2 miles long.....	Providence.
Clematis; brook in Waltham and Belmont, 4 miles long; flows into Beaver Brook	Boston.
Clesson; brook in Buckland and Hawley; flows into Deerfield River...	Hawley.
Clew; pond in Plymouth	Plymouth.
Cliff; pond in Brewster..	Wellfleet.
Clifton Heights; village in Brockton..........................	Dedham.
Clifton Station; village in southeast part of Marblehead......	Boston Bay.
Cliftondale; village in Saugus on south branch of Boston and Maine R. R...	Boston.
Clinton; town in Worcester County; area, 7 square miles.....	Marlboro.
Clinton; village in town of same name..........................	Markboro.
Clinton Mill; pond in town of Clinton........................	Marlboro.
Coatue; beach on coast of Nantucket..........................	Nantucket.
Coatue; point at southern extremity of Coatue Beach in Nantucket Harbor	Nantucket.
Cobb; pond in Brewster..	Wellfleet.
Cobber; brook in Merrimac	Haverhill.
Cobble; mountain in Granville and Russell; altitude, 1,220 feet.	Granville.
Cobbler; brook in Merrimac; flows into Merrimac River......	Newburyport.
Cocassett; pond in Foxboro..................................	Franklin.
Cochesett; village in West Bridgewater......................	Dedham.
Cochituate; village in Wayland...............................	Framingham.
Cochituate; lake in Wayland, Framingham, and Natick......	Framingham.
Cochituate; reservoir in Natick...............................	Framingham.
Cochituate; railroad station in Framingham on Saxonville branch of Boston and Albany R. R..........................	Framingham.
Cochran; pond in Blandford..................................	Granville.
Coffin; beach about 2 miles long in northern part of Gloucester on Annisquam Harbor	Gloucester.
Cohasse; brook, right-hand branch of Quineboag River in Southbridge	Brookfield.
Cohasset; town in Norfolk County; area, 13 square miles....	Boston Bay. Abington.
Cohasset; village in east part of Cohasset....................	Abington.
Cohasset; cove opening into Cohasset Harbor on east coast of Cohasset	Abington.
Cohasset; harbor of irregular shape on east coast of Cohasset.	Abington.
Cohasset Narrows; channel connecting with Buzzards Bay and separating Wareham from Sandwich..................	Falmouth.

	Atlas sheets.
Colburn; reservoir in Leominster	Fitchburg.
Colchester; brook in Plympton and Halifax, tributary to Wenatuxet River, 4½ miles long	Middleboro.
Cold; brook in Sudbury, 1¼ miles long	Framingham.
Cold; village in Oakham	Barre.
Cold; hill in western part of Granby; elevation, 380 feet	Northampton.
Cold; river in Charlemont and Florida, tributary to Deerfield River.	Greylock. Hawley.
Cold Harbor; brook in Boylston and Northboro, 3 miles long.	Marlboro.
Cold Spring; brook in Ashland and Hopkinton	Franklin.
Cold Spring; brook in Harvard, 2 miles long	Groton.
Cold Spring; brook in town of Sutton	Blackstone.
Cold Spring; brook in Newton, tributary to Charles River	Boston.
Cold Spring; brook in Ashland	Framingham.
Cold Springs; village in southern part of Otis on Farmington River	Sandisfield.
Coleman; hill in eastern part of Scituate; elevation, 100 feet.	Duxbury.
Coleraine; town in Franklin County; area, 41 square miles	Greenfield. Hawley.
Coleraine Center; village in town of same name	Greenfield.
Coles; river in Dighton, Rehoboth, and Swansea	Fall River. Taunton.
Coles Branch; small tributary to west branch of Westfield River in Middlefield	Becket.
Coles Station; railway station in southwestern part of Swansea	Fall River.
College; pond in Plymouth	Plymouth.
Colley; hill in northern part of Worcester County; elevation, 980 feet	Brookfield.
Collins; cove in the northeastern coast of Salem	Salem.
Collins Depot; village in Ludlow on Springfield, Athol, and northeastern branch of Boston and Albany R. R	Palmer.
Colonel; mountain in northeastern corner of town of Palmer; altitude, 1,740 feet	Brookfield.
Commercial; point of Dorchester which extends into Dorchester Bay	Boston.
Concord; town in Middlesex County; area, 26 square miles	Framingham.
Concord; village in Concord on Fitchburg R. R	Framingham.
Concord; river, right branch of Merrimac River in eastern part of State.	Framingham. Lowell.
Cone; brook in Richmond	Pittsfield.
Congamuck; ponds in Southwick	Granville.
Connecticut; river which heads in Canada, forms boundary between New Hampshire and Vermont, crosses Massachusetts and Connecticut, and flows into Long Island Sound.	Warwick. Greenfield. Northampton. Springfield.
Connecticut River; railroad forming part of the Boston and Maine railroad system which traverses the State from north to south, following the general course of the Connecticut River.	
Conscience; hills in Westford and Tyringham	Lowell.
Conspiracy; island in Taunton River in Berkley	Taunton.
Constitution; hill in central part of Lanesboro; elevation, 1,500 feet	Greylock.

	Atlas sheets.
Conway; town in southwestern part of Franklin County; area, 57 square miles.	Chesterfield. Northampton. Greenfield.
Conway; village in town of same name	Greenfield.
Conway Depot; railway station in town of Conway on New Haven and Northampton R. R	Greenfield.
Cook; mountain in town of Brimfield; altitude, 1,000 feet	Palmer.
Cook; pond in northern part of Plymouth	Plymouth.
Cook; pond in southwestern part of Fall River	Fall River.
Cooley; brook in Buckland and Hawley, 1½ miles long	Hawley.
Cooleyville; village in New Salem	Belchertown.
Coolidge; hill in Gardner; elevation, 1,160 feet	Fitchburg.
Coon; hill in Charlemont	Hawley.
Coonemossett; pond in northern part of Falmouth, having an outlet into Great Pond	Falmouth.
Cooper; pond in Carver	Middleboro.
Copaum; pond in Nantucket	Nantucket.
Copecut; hill in eastern part of Fall River; elevation, 355 feet.	Fall River.
Copecut; river, tributary to Shingle Island River, in eastern part of Fall River	Fall River.
Copper Works; village in Norton	Taunton.
Cordaville; village in town of Southboro, on Boston and Albany R. R	Marlboro.
Corey; hill in Brookline; elevation, 300 feet	Boston.
Cotley; river in Taunton and Berkley; tributary to Taunton River	Taunton.
Cottage City; town in Dukes County; area, 8 square miles	Marthas Vineyard.
Cottage City; village in town of Cottage City, Marthas Vineyard	Marthas Vineyard.
Cottsville; village in northeastern part of Pittsfield	Becket.
Cotuit; river on southwest boundary of Barnstable	Barnstable.
Cotuit; village in west part of Barnstable	Barnstable.
Cotuit; ponds in Barnstable	Barnstable.
Cotuit Highlands; name applied to high land lying south of Cotuitport, in southwest part of Barnstable	Barnstable.
Cotuitport; village on Osterville Harbor, on southwest coast of Barnstable	Barnstable.
Couch; brook in Bernardston, 3 miles long; tributary to Fall River	Greenfield.
Course; brook in Sherborn and Natick; 3 miles long; flows into Cochituate Reservoir	Framingham.
Cove; village in southern part of Beverly	Salem.
Cow; creek in Sandwich, emptying into Cape Cod Bay	Barnstable.
Cow; pond in Groton.	
Cow Pond; brook in Groton	Groton.
Cow Pond; meadows in Groton	Groton.
Cowdrey; hill in Stoneham; elevation, 200 feet	Boston.
Coweset; brook in Stoughton, Brockton, and West Bridgewater; 8 miles long	Dedham.
Cox; pond in eastern part of Wenham	Salem.
Coy; brook in North Brookfield	Brookfield. Barre.
Coy; hill in West Brookfield; elevation, 1,100 feet	Barre.
Crafts; hill in Holyoke; elevation, 560 feet	Springfield,

	Atlas sheets.
Crag; mountain in Northfield; elevation, 1,560 feet	Warwick.
Craigville; village in southern part of Barnstable	Barnstable.
Cranberry; river, small tributary to Quoboag River, in Spencer.	Brookfield.
Cranberry; pond in Montague	Greenfield.
Cranberry; pond in Lancaster	Groton.
Cranberry; pond in Lakeville	Middleboro.
Cranberry; pond in central part of Duxbury, drained by South River	Duxbury.
Cranberry; pond in south part of Braintree	Abington.
Cranberry Meadow; pond in Spencer	Brookfield.
Cranberry Pond; brook in Montague, 3 miles long, tributary to Connecticut River	Greenfield.
Crane; river in Danvers, formed by Crane and Beaver brooks, and emptying into Beverly Harbor	Salem.
Crane; pond in West Stockbridge	Pittsfield.
Crane; brook tributary to Crane River, in southern part of Danvers	Salem.
Crane; hill in eastern part of Washington; elevation, 1,780 feet.	Becket.
Crane; hill in Marlboro; elevation, 544 feet	Marlboro.
Crane Neck; hill in West Newbury; elevation, 234 feet	Newburyport.
Crane Station; village in Norton, on Mansfield branch of Old Colony R. R.	Taunton.
Creek; brook in Haverhill, 2¼ miles long, flows into Merrimac River	Haverhill.
Creek; pond in Haverhill	Haverhill.
Crescent; beach on southern coast of Gloucester between Magnolia Point and Normans Woe	Gloucester.
Crescent Beach Station; village on southeast coast of Revere.	Boston Bay.
Cricket; hill in southeastern part of Conway; elevation, 1,180 feet.	Greenfield. Northampton.
Crockerville; village in Fitchburg, on Fitchburg R. R.	Fitchburg.
Cromeset; point on southeastern end of Cromeset Neck, projecting into Buzzards Bay	Falmouth.
Cromeset Neck; peninsula extending from the coast of Wareham into Buzzards Bay, between Weweantic River and Mark Cove	Falmouth.
Crooked; pond in Falmouth	Falmouth.
Crooked; pond in southern part of Boxford	Salem.
Crooked; pond in Plymouth	Plymouth.
Crooked; pond in Plainfield	Hawley.
Crooked; river emptying into Wareham River, in Wareham	Falmouth.
Crooked Spring; brook in Chelmsford, 1½ miles long	Lowell.
Croskaty; pond in Nantucket	Nantucket.
Cross; island in Annisquam Harbor, northwest of Gloucester	Gloucester.
Crow; hill in Templeton; elevation, 1,160 feet	Winchendon.
Crow; island in New Bedford Harbor between Fair Haven and New Bedford	New Bedford.
Crow; point on north coast of Hingham	Boston Bay.
Crow; point on eastern coast of Scituate, south of Scituate Harbor	Duxbury.
Crow; pond in Barnstable	Chatham.
Crowfoot; brook in Chicopee, 3 miles long, tributary to Chicopee River	Springfield.

	Atlas sheets.
Crow Hill; brook in Templeton, 2 miles long, flows into Trout River	Winchendon.
Crystal; pond in Wakefield	Boston.
Crystal; lake in town of Gardner	Fitchburg.
Crystal; lake near coast in south part of Barnstable	Barnstable.
Crystal; lake in Newton	Boston.
Crystal; pond in Melrose	Boston.
Cub; hill in west part of Westhampton	Chesterfield.
Cuggins; brook in Boxboro and Acton, 2 miles long	Framingham.
Cumberland Mills; village in Attleboro	Providence.
Cummingsville; village in Woburn	Boston.
Cummington; town in Hampshire County; area, 23 square miles	Chesterfield.
Curtis; hill in Charlton; elevation, 960 feet	Webster.
Curtis; point on southern coast of Beverly	Salem.
Curtis; pond in Greenwich	Belchertown.
Curtis; pond in Worcester	Webster.
Curtisville; village in Stockbridge	Pittsfield.
Cushing; pond south of central part of Hingham	Abington.
Cut River; marshy passage between Duxbury Bay and Green Harbor, in Marshfield	Duxbury.
Cutler; pond in southern part of Hamilton	Salem.
Cuttyhunk; harbor on Cuttyhunk Island	Gay Head.
Cuttyhunk; one of the Elizabeth Islands, Gosnold	Gay Head.
Cuttyhunk; light-house on coast of Cuttyhunk Island, Gosnold	Gay Head.
Cuttyhunk; pond on Cuttyhunk Island, opening into Cuttyhunk Harbor, Gosnold	Gay Head.
Date; hill in northern part of Danvers; elevation, 140 feet	Salem.
Dalton; town in central part of Berkshire County; area, 22 square miles	Becket.
Dalton; village in central part of Dalton	Becket.
Dam Lot; brook in Raynham, tributary to Taunton River	Taunton.
Damson; brook in Middleboro; 1 mile long, tributary to Bartlett Brook	Middleboro.
Dan; mountain in northwest part of Sturbridge	Brookfield.
Dana; town in Worcester County; area, 19 square miles	Belchertown.
Dana; village in town of same name	Barre.
Danforth; brook in Hardwick, 4 miles long	Barre.
Daniel; mountain in Douglass; altitude, 785 feet	Webster.
Daniel; brook in Pittsfield and Lanesboro	Pittsfield.
Danvers; town in southern part of Essex County; area, 14 square miles	Salem.
Danvers; village in southeastern part of Danvers	Salem.
Danvers Center; village in southern part of Danyers	Salem.
Danversport; village in southeastern part of Danvers	Salem.
Darby; mountain in northeastern part of Mount Washington; altitude, 2,020 feet	Sheffield.
Darby; pond in northern part of Plymouth	Plymouth.
Dark; brook in Auburn; 3 miles long	Webster.
Dartmouth; seaboard town in southern part of Bristol County, area 66 square miles.	Fall River. New Bedford.
Dartmouth; village in southwestern part of Dartmouth	Fall River.
Davis; pond in Greenwich	Belchertown.
Davis; village in town of Rowe	Hawley.

	Atlas sheets.
Davis Neck; island off northern coast of Gloucester	Gloucester.
Davis Neck; peninsula in southern part of Falmouth, between Green Pond and Bowen Pond	Falmouth.
Day; brook in central part of Chester	Chesterfield.
Day; hill in eastern part of Williamsburg	Northampton.
Dayville; village in Chester	Chesterfield.
Dead; hill in Bradford; elevation, 280 feet	Lawrence.
Dead; pond in Hardwick	Barre.
Dead Branch; stream in Chesterfield	Chesterfield.
Dead; swamp in Townsend	Groton.
Dead; swamp in Raynham	Taunton.
Dead; pond in Townsend	Groton.
Dead; pond in Lunenburg	Groton.
Dead Neck; narrow strip of land between Osterville Harbor and Nantucket Island in southwest part of Barnstable	Barnstable.
Dean; pond near coast in Mashpee	Barnstable.
Dedham; town in Norfolk County; area, 23 square miles	Dedham. Boston.
Dedham; village in town of same name, on Dedham branch of Boston and Albany R. R.	Dedham. Boston.
Deep; brook in Chelmsford, 2 miles long	Lowell.
Deep; point on shore of Snipatuit Pond, Rochester	Middleboro.
Deep; pond in Falmouth	Falmouth.
Deep; pond, in northern part of Bourne	Falmouth.
Deep Bottom; creek in Tisbury, Marthas Vineyard, tributary to Great Tisbury Pond	Marthas Vineyard.
Deep Hole; harbor at west entrance of Osterville Harbor in southwest part of Barnstable	Barnstable.
Deer; pond in southern part of Plymouth	Plymouth.
Deer: hill in southeast part of Huntington	Chesterfield.
Deer; hill in southwest part of Plainfield	Chesterfield.
Deer Island; granite beacon in the shape of a pyramid, south of Deer Island	Boston Bay.
Deerfield; town in Franklin County; area, 36 square miles	Greenfield.
Deerfield; village in town of same name, on New Haven and Northampton R. R.	Greenfield.
Deerfield; swamp in western part of Dartmouth	Fall River.
Demond; pond in Rutland	Worcester.
Den Stream; brook in Middlefield, tributary to middle branch of Westfield River	Chesterfield.
Denison; lake in Winchendon	Winchendon.
Dennis; town in Barnstable County; area, 23 square miles	Yarmouth. Wellfleet.
Dennis; village in town of same name	Yarmouth.
Dennis; pond south of Yarmouthport in town of Yarmouth	Barnstable.
Dennisport; village in town of Dennis	Yarmouth.
Denny; hill in Leicester; elevation, 960 feet	Webster.
Dennyville; village in town of Barre	Barre.
Devereux Station; village in eastern part of Marblehead	Boston Bay.
Devils Cavern; cave on line between Granby and Amherst	Northampton.
Devol; pond in western part of Westport	Fall River.
Dickinson Branch; brook in Granville, 4 miles long	Granville.
Dighton; town in Bristol County; area, 23 square miles	Taunton.

	Atlas sheets.
Dighton; village in town of same name on main line Old Colony R. R.	Taunton.
Dighton Rock; small island in Taunton River	Taunton.
Dimmick; pond in Springfield	Palmer.
Dock; creek in north part of Sandwich, emptying into Cape Cod Bay	Barnstable.
Dock; pond in southern part of Plymouth	Plymouth.
Dodgeville; village in Attleboro	Providence.
Doggett; brook tributary to Sippican River in Rochester	New Bedford.
Dolbier; hill in Templeton; elevation, 1,280 feet	Winchendon.
Dole Corner; cross roads in central part of Rowley	Salem.
Dorchester; village in city of Boston	Boston.
Dorchester; bay east of village of same name in Boston Harbor.	Boston.
Dorothy; brook in Millbury	Blackstone.
Dorothy; hill in Millbury; elevation, 460 feet	Webster.
Dorothy; pond in Millbury	Webster.
Double; brook in Dracut, 3 miles long; has its source in Long Pond and flows into Merrimac River	Lowell.
Double; brook in Middleboro and Craver, 1 mile long, tributary to Weweantic River	Middleboro.
Doublet; hill in Weston; elevation, 360 feet	Framingham.
Dougal; mountain in town of Hardwick; altitude, 1,060 feet..	Barre.
Douglass; town in Worcester County; area, 39 square miles..	Blackstone. Webster.
Douglass; village in town of same name	Blackstone.
Dover; town in Norfolk County; area, 15 square miles	Franklin. Framingham.
Dover; village in town of same name, on New York and New England R. R., Woonsocket division	Franklin.
Downer Landing; village on north coast of Hingham	Boston Bay.
Dracut; town in Middlesex County; area, 22 square miles	Lowell.
Dracut; village in town of same name	Lowell.
Dragon; brook in Shelburne; 6 miles long, tributary to North River	Greenfield.
Dragon; hill in Shelburne; elevation, 780 feet	Greenfield.
Drake; hill in northwest part of Worthington	Chesterfield.
Dramanville; village in Millbury	Webster.
Dread Ledge; island on southeast coast of Swampscott	Boston Bay.
Dresser; hill in Charlton; elevation, 880 feet	Webster.
Dresser; pond in southern part of Goshen	Chesterfield.
Drinkwater; river in west part of Hanover	Abington.
Dry; brook, branch of Schenob brook in western part of Sheffield	Sheffield.
Dry; brook, branch of Hoosic River in eastern part of Cheshire.	Greylock.
Dry; brook in northwestern part of South Hadley	Northampton.
Dry; brook in Bernardston and Gill	Greenfield.
Dry; hill in Montague; elevation, 1,100 feet	Warwick.
Dry; hill in southern part of Conway; elevation, 1,380 feet	Northampton.
Dry; hill in northern part of New Marlboro; elevation, 1,746 feet	Sandisfield.
Dry Brook; hill in northwestern part of South Hadley; elevation, about 240 feet	Northampton.
Duck; creek in Wellfleet; tributary to Wellfleet Harbor	Wellfleet
Duck: harbor on west coast of Wellfleet	Wellfleet.

	Atlas sheets.
Duck; islands in Merrimac River, near city of Lowell	Lowell.
Duck; pond in Groton	Groton.
Duck Hill; river in northeastern part of Duxbury, emptying into Duxbury Bay	Duxbury.
Duckville; village in Palmer	Palmer.
Dudley; town in Worcester County; area, 22 square miles	Webster.
Dudley; village in town of same name	Webster.
Dudley; brook in Sudbury	Framingham.
Dudley; pond in Wayland	Framingham.
Dudleyville; village in Leverett	Belchertown.
Dug; brook in southwestern part of Sunderland, emptying into Connecticut River	Northampton.
Dug; hill in Blandford; elevation, 1,600 feet	Granville.
Dug; pond in Natick	Framingham.
Dumpling; mountain in Palmer; altitude, 741 feet	Palmer.
Dumpling Rock; a fifth order, fixed white light, off Round Hill Point, Dartmouth; lantern, 42 feet above sea level and visible 11¾ miles	New Bedford.
Dunbar; brook in Monroe and Florida, tributary to Deerfield River	Hawley.
Dunham; pond in Lakeville	Middleboro.
Dunn; brook flowing into Quaboag River in Brookfield	Brookfield.
Dunn; pond in Auburn	Webster.
Dunstable; Town in Middlesex County; area, 18 square miles	Groton. Lowell.
Dunstable; village in town of same name	Lowell.
Duxbury; an old seaboard town in eastern part of Plymouth County; area, 27 square miles	Duxbury.
Duxbury; village in eastern part of Duxbury, on Duxbury Bay.	Duxbury.
Duxbury; bay, large arm of Cape Cod Bay, between the mainland and Duxbury Beach	Duxbury.
Duxbury; lighthouse at entrance to Duxbury Harbor, Duxbury.	Plymouth.
Duxbury; marsh in eastern part of Duxbury	Duxbury.
Duxbury; railway station in eastern part of Duxbury	Duxbury.
Duxbury; beach extending southeasterly from Duxbury, between Duxbury Bay and Cape Cod Bay	Duxbury.
Dwight; village in Belchertown, on New London Northern R. R.	Belchertown.
Eagle; island about 2 miles off northeast coast of Marblehead.	Salem.
Eagle; pond in Dennis	Yarmouth.
Eagle; pond in southwest part of Barnstable	Barnstable.
Eagleville; village in Holden	Worcester.
Eagleville; village in Athol	Warwick.
East; pond on coast of Tuckernuck Island	Muskeget.
East; point on southeast coast of Nahant	Boston Bay.
East; pond in southeastern part of New Marlboro	Sandisfield.
East; pond in Greenwich	Belchertown.
East; mountain in Bernardston; altitude, 1,160 feet	Greenfield.
East; mountain, long ridge forming part of Taconic range in Hancock; extreme altitude, 2,360 feet	Berlin.
East; hill in town of Monson; elevation, 860 feet	Palmer.
East; village in central part of Amherst	Northampton.
East; hill in Shelburne; elevation, 1,120 feet	Greenfield.
East; village in Webster	Webster.
East; brook tributary to Quinebaug River in Brimfield	Brookfield.

	Atlas sheets.
East Blackstone; village in Blackstone	Blackstone.
East Boston; part of the city of Boston on island in Boston Harbor	Boston.
East Braintree; village in northeast part of Braintree	Abington.
East Branch; stream on south boundary of Chesterfield	Chesterfield.
East Brewster; village in town of Brewster	Wellfleet.
East Bridgewater; town in Plymouth County; area, 18 square miles	Abington.
East Brimfield; village in Brimfield	Brookfield.
East Brookfield; river tributary to Quaboag Pond in Brookfield	Brookfield.
East Brookfield; village in northwestern part of Brookfield	Brookfield.
East Charlemont; village in town of Charlemont	Hawley.
East Chop; lighthouse on north coast of Cottage City, Marthas Vineyard	Marthas Vineyard.
East Dedham; village in town of Dedham, on Dedham branch of Boston and Providence R. R	Dedham.
East Dennis; village in town of Dennis	Yarmouth.
East Douglas; village in town of Douglas	Blackstone.
East Falmouth; village in southern part of Falmouth	Falmouth.
East Farms; village in Westfield	Springfield.
East Foxboro; village in town of Foxboro, on Boston and Providence R. R	Dedham.
East Freetown; village in town of Freetown	Middleboro.
East Freetown; station on Old Colony R. R., New Bedford branch, in Freetown	Middleboro.
East Gloucester; village or extension of city of Gloucester on East Point at head of Gloucester harbor, Gloucester	Gloucester.
East Granville; village in town of Granville	Granville.
East Groton; station on Nashua, Acton and Boston R. R., in town of Groton	Groton.
East Harwich; village in town of same name	Yarmouth.
East Holliston; village in town of Holliston, on Boston and Albany R. R	Franklin.
East Lee; village in central part of Lee	Becket.
East Lexington; village in Lexington, on Boston and Lowell R. R	Boston.
East Littleton; station on Nashua, Acton and Boston R. R., in Westford	Lowell.
East Longmeadow; village in town of Longmeadow, on New York and New England R. R	Springfield.
East Mansfield; village in town of Mansfield	Dedham.
East Marshfield; village in northeastern part of Marshfield	Duxbury.
East Medford; village in town of Medford, on Boston and Maine R. R	Boston.
East Middleboro; village in town of Middleboro	Middleboro.
East Milton; village in town of Milton	Boston.
East Orleans; village in town of Orleans	Wellfleet.
East Otis; village in southeastern part of Otis	Sandisfield.
East Pembroke; village in eastern part of Pembroke	Abington.
East Pepperell; village in town of Pepperell, on Boston and Maine R. R	Groton.
East Phillipston; village in town of Phillipston	Winchendon.
East Princeton; village in Princeton	Worcester.

	Atlas sheets.
East Rock; rocky point in central part of Great Barrington; elevation, 1,560 feet	Sheffield.
East Rocky Gutter; brook in Middleboro, tributary to Double Brook	Middleboro.
East Salisbury; village in town of Salisbury, on Boston and Maine R. R	Newburyport.
East Sandwich; village in Sandwich, on Cape Cod branch Old Colony R. R	Barnstable.
East Saugus; village in eastern part of Saugus	Boston Bay.
East Shelburne; village in town of Shelburne	Greenfield.
East Stoughton; village in town of Stoughton	Dedham.
East Sudbury Station; in Sudbury, on Massachusetts Central R. R	Framingham.
East Sutton; village in town of Sutton	Blackstone.
East Taunton; village in town of Taunton, on Middleboro and Taunton R. R	Taunton.
East Templeton; village in town of Templeton	Winchendon.
East Wachusett; brook in Princeton, 4 miles long, tributary to Stillwater River	Worcester.
East Walpole; village in town of Walpole	Dedham.
East Waushaccum; pond in town of Sterling	Marlboro.
East Weymouth; village in eastern part of Weymouth	Abington.
East Whately; village in eastern part of Whately	Northampton.
East Woburn; village in town of Woburn	Boston.
Eastern; point in southern part of Gloucester, extending into Atlantic Ocean	Gloucester.
Eastern; part of Boston and Maine R. R. system.	
Eastham; town in Barnstable County; area, 16 square miles	Wellfleet.
Eastham Center; village in town of Eastham	Wellfleet.
Easthampton; town in southern part of Hampshire County; area, 15 square miles	Northampton.
Easthampton; village and railway station in central part of town of same name	Northampton.
Easton, town in Bristol County; area, 32 square miles	Dedham.
Easton Center; village in town of Easton on Old Colony R. R.	Dedham.
Eastville; village in Cottage City, Marthas Vineyard	Marthas Vineyard.
Eastville; village in east part of East Bridgewater	Abington.
Eddyville; village in Middleboro	Middleboro.
Edgartown; town in Dukes County; area, 30 square miles	Marthas Vineyard.
Edgartown; village in town of same name, Marthas Vineyard.	Marthas Vineyard.
Edgartown; harbor of Edgartown	Marthas Vineyard.
Edgartown; light-house in Edgartown Harbor, Marthas Vineyard	Marthas Vineyard.
Edmund; hill in Northboro	Marlboro.
Eel; point on west coast of Nantucket	Muskeget.
Eel; pond (salt) in southern part of Falamouth, opening into Waquoit Bay	Falmouth.
Eel; pond in Edgartown, opens into Edgartown Island	Marthas Vineyard.
Eel; river in northern part of Plymouth	Plymouth.
Egg; island in New Bedford Harbor	New Bedford.
Egg Rock; light-house east of Nahant at south entrance of Nahant Bay, 87 feet above sea level. Fixed red light, visible 12 miles	Boston Bay.

	Atlas sheets.
Egremont; town in southwestern part of Berkshire County; area, 19 square miles	Sheffield.
Egremont; village in town of same name	Sheffield.
Elbow; pond in southern part of Plymouth	Plymouth.
Elder; pond in Lakeville	Middleboro.
Eldridge; pond in Harwich	Yarmouth.
Elizabeth; group of islands forming town of Gosnold	Gay Head.
Ellinwood; brook in Athol	Winchendon.
Ellis; pond in northern part of Plymouth	Plymouth.
Ellis; river, right tributary of Quaboag River on the boundary between West Brookfield and Warren	Brookfield.
Ellsworth; village in Acton	Framingham.
Elm; brook in Bedford	Framingham.
Elm Grove; village in Colerain̈e	Greenfield.
Elmer; brook tributary to Bachelor Brook in northern part of South Hadley	Northampton.
Elmwood; village in south part of East Bridgewater	Abington.
Elmwood; railway station in south part of East Bridgewater	Abington.
Elwell; island in Connecticut River between Hadley and Northampton	Northampton.
Emerson; brook in Uxbridge, tributary to Blackstone River	Blackstone.
Emerson; hill in Douglas; elevation, 700 feet	Webster.
Emerson; point in eastern extremity of Rockport	Gloucester.
Enfield; town in Hampshire County; area, 18 square miles	Belchertown.
Enfield; village in town of same name on Boston and Albany R. R	Belchertown.
Ephraim; mountain in Lexington	Boston.
Erving; town in Franklin County; area, 14 square miles	Warwick.
Essex; low, marshy river in eastern part of Essex County, draining Chebacco Lake and emptying into Annisquam Harbor	Salem.
Essex; village in eastern part of Essex	Salem.
Essex; town in western part of Essex County; area, 18 square miles.	Salem. Gloucester.
Essex Branch; stream in southern part of Essex County, emptying into Beverly Harbor	Salem.
Essex Falls; railway station in central part of Essex	Salem.
Esther; mountain in northern part of Whately; altitude, 987 feet	Northampton.
Ethel; mountain in northwestern part of Mount Washington; altitude, 1,900 feet	Sheffield.
Everett; town in Middlesex County; area, 4 square miles	Boston.
Everett; village in town of same name on Boston and Maine R. R	Boston.
Everett; mountain in eastern part of Mount Washington; altitude, 2,624 feet	Sheffield.
Evergreen; mountain in Stockbridge; altitude, 1,060 feet	Pittsfield.
Erving; village in town of same name on Fitchburg R. R	Warwick.
Ezekiel; pond in southern part of Plymouth	Plymouth.
Facing; hills in Granby, Belchertown, and Ludlow; elevation, 780 feet	Palmer.
Facing Rock; hill in Ludlow; elevation, 620 feet	Palmer.
Factory; village in Gill	Greenfield.
Factory; brook tributary to Westfield River, flowing southerly through Peru and Middlefield	Becket.

	Atlas sheets.
Factory Hollow; village in northern part of Amherst	Northampton.
Fair Haven; town in southeastern part of Bristol County on New Bedford Harbor; area, 12 square miles	New Bedford.
Fair Haven; village on New Bedford Harbor in Fair Haven	NewBedford.
Fair Haven; hill in Concord; elevation, 320 feet	Framingham.
Fair Haven; pond in Concord	Framingham.
Fairmount; hill in Marlboro; elevation, 520 feet	Marlboro.
Fall; brook in Middleboro, 3 miles long, tributary to Namasket River	Middleboro.
Fall; brook in Leominster	Worcester. Fitchburg.
Fall; brook in Royalston	Winchendon.
Fall; brook in eastern part of Freetown, emptying into Long Pond.	Middleboro. New Bedford.
Fall; hill in Orange; elevation, 1,067 feet	Warwick.
Fall Hill; brook in Orange, 2 miles long	Warwick.
Fall Hill; meadow in town of Orange	Warwick.
Fall River; manufacturing city of Bristol County, located on shore of Mount Hope Bay at mouth of Taunton River. Original name was Troy. Area, 34 square miles	Fall River.
Falls; river in Bernardston, and between Gill and Greenfield, tributary to Connecticut River	Greenfield.
Fallulah; brook in Fitchburg and Ashby	Fitchburg.
Falmouth; seaboard town on southwestern part of Cape Cod between Buzzards Bay and Vineyard Sound, named from Falmouth, England; area, 45 square miles	Falmouth.
Falmouth; village in southwestern part of Falmouth	Falmouth.
Falmouth Harbor; village in Falmouth, on shore of Vineyard Sound	Falmouth.
Falmouth Heights; watering place in southern part of Falmouth, on shore of Vineyard Sound	Falmouth.
Faqua; pond in Edgartown, Marthas Vineyard	Marthas Vineyard.
Farley; brook in Chelmsford, tributary to River Meadow Brook	Lowell.
Farm; hill in Marlboro; elevation, 430 feet	Marlboro.
Farm; hill in Stoneham; elevation, 200 feet	Boston.
Farm; pond in Sherborn	Franklin.
Farm; pond in Cottage City, Marthas Vineyard	Marthas Vineyard.
Farm; pond in Framingham	Framingham.
Farmerville; village in Sandwich	Barnstable.
Farmington; river flowing southerly through eastern part of Berkshire County into state of Connecticut	Sandisfield.
Farnumsville; village in Grafton, on Providence and Worcester R. R	Blackstone.
Farrow; hill in Barre; elevation, 1,115 feet	Barre.
Fawn; lake in town of Bedford	Lowell.
Fay; mountain in Hopkinton; altitude, 700 feet	Blackstone.
Fayville; village in Bolton	Marlboro.
Fayville; village in town of Southboro	Marlboro.
Feake, Mount; hill in Waltham	Boston.
Fearing; pond in southern part of Plymouth	Plymouth.
Feeding Hill; village in Agawam	Springfield.
Felchville; village in Natick, on Boston and Albany R. R	Framingham.
Fenton; brook, in southern part of Egremont	Sheffield.

	Atlas sheets.
Fenton; mountain in town of Brimfield; altitude, 960 feet	Palmer.
Fentonville; village in town of Brimfield	Palmer.
Ferry; point on east coast of Quincy, projecting into Weymouth Fore River, Quincy	Abington.
Field; brook in Chicopee, 3¼ miles long	Springfield.
Fields; hill in southeastern part of Conway; elevation, 1,200 feet	Northampton.
Fife; brook in Florida, 1½ miles long, tributary to Deerfield River	Hawley.
Filley; mountain in central part of Otis; also called Tilley Mountain; altitude, 1,717 feet	Sandisfield.
First; branch of Jones River, in Kingston	Plymouth.
First; branch of Connecticut River, in eastern part of Whately	Northampton
First; brook in Buckland	Hawley.
First Herring; branch of North River, in southern part of Scituate	Duxbury.
First Herring; brook in south part of Scituate	Abington.
Fish; brook, branch of Ipswich River, flowing through Boxford.	Lawrence. Salem.
Fish; brook in Andover, tributary to Merrimac River	Lawrence.
Fish; island off eastern coast of Sconticut Neck, Fair Haven	New Bedford.
Fish; pond in northern part of Plymouth	Plymouth.
Fishing; river in Plaistow, N. H., and Haverhill, Mass., 4 miles long, tributary to Little River	Haverhill.
Fisk; hill in New Salem; elevation, 1,000 feet	Warwick.
Fisk; hill in eastern part of Sturbridge	Brookfield.
Fiskdale; village in Sturbridge	Brookfield.
Fitchburg; city in Worcester County; area, 29 square miles	Fitchburg.
Fitchburg; railroad connecting Fitchburg with Troy, N. Y.	
Fivemile; pond in southern part of Plymouth	Plymouth.
Fivemile; pond in Springfield	Springfield.
Fivemile; river in North Brookfield, 5 miles long; flows into Furnace Pond	Barre.
Fivepound; island in the head of Gloucester Harbor	Gloucester.
Flag; brook in Westminster and Fitchburg	Fitchburg.
Flagg Meadow; brook in Dracut and Lowell, 1 mile long; flows into Merrimac River	Lowell.
Flat; brook in towns of Hardwick and Ware	Belchertown.
Flat; hill in Spencer; elevation, 1,060 feet	Webster.
Flat; hill in Southampton; elevation, 440 feet	Granville.
Flat; hill in Lunenburg; elevation, 523 feet	Groton.
Flat; pond on southeast coast of Mashpee	Barnstable.
Flat; pond in Brewster	Wellfleet.
Flat; pond in Groton	Groton.
Flax; pond in Yarmouth	Yarmouth.
Flax; pond in southern part of Bourne	Falmouth.
Flax; pond in Dennis	Yarmouth.
Flax; pond in Wareham	Plymouth.
Flax; pond in Harwich	Yarmouth.
Flint; pond in Grafton	Blackstone.
Florence; village on Mill River in Northampton	Northampton.
Florida; mountainous town in northern part of Berkshire County; area, 24 square miles.	Hawley. Greylock.
Florida; village in northern part of town of same name	Greylock.
Flower; hill in Warwick; elevation, 1,200 feet	Warwick.

	Atlas sheets.
Flushing; hill in Westford; elevation, 300 feet	Lowell.
Flushing; pond in Westford	Lowell.
Folger; hill in Nantucket	Nantucket.
Follins; pond on eastern boundary of Yarmouth	Yarmouth.
Folly; cove in northern coast of Cape Arm, between northern extremity of Gloucester and Rockport	Gloucester.
Folly; hill in eastern part of Danvers; elevation about 200 feet	Salem.
Folsom; pond in Wayland	Framingham.
Forest; river in eastern part of Salem	Boston Bay.
Forest; pond in Palmer	Palmer.
Forest; pond in Middleton	Lawrence.
Forest; hill in Dunstable; elevation, 340 feet	Lowell.
Forestdale; village in southern part of Sandwich; also called Greenwich	Falmouth.
Forest Hills; village in city of Boston	Boston.
Forge; hill in Hawley; elevation, 1,845 feet	Hawley.
Forge; pond in Freetown	Taunton.
Forge; pond in Raynham	Taunton.
Forge; pond in Granby	Belchertown.
Forge; pond in Westford	Lowell.
Forge; village in Westford, on Stoney Brook R. R	Lowell.
Forked; pond in Nantucket	Nantucket.
Fort; hill in Ashby; elevation, 800 feet	Fitchburg.
Fort; hill in Oxford; elevation, 860 feet	Webster.
Fort; hill in Lowell; elevation, 260 feet	Lowell.
Fort; point on southwestern coast of Fair Haven	New Bedford.
Fort; pond in Lancaster	Groton.
Fort; pond in Littleton	Lowell.
Fort; river in Pelham and Amherst	Northampton. Belchertown.
Fort Hill; village in western part of Hingham	Abington.
Fort Meadow; reservoir in Marlboro	Marlboro.
Fort Pond; brook in Boxboro, Acton, and Concord	Framingham.
Foster; brook in town of Gardner	Fitchburg.
Foster; hill in southern part of West Brookfield; altitude, 800 feet	Brookfield.
Foster; pond in south part of Andover	Lawrence.
Fourmile; pond in Boxford	Lawrence.
Fourmile; brook in Northfield, tributary to Connecticut River.	Warwick.
Foundry; brook in Coleraine, 4 miles long, tributary to east branch of North River	Greenfield.
Foundry; village in Palmer	Palmer.
Four Corners; village in Palmer	Palmer.
Fox; brook in Blackstone; flows into Blackstone River	Blackstone.
Fox; creek in eastern part of Ipswich	Salem.
Fox; hill in eastern part of Peabody; elevation, 120 feet	Salem.
Fox; hill in Dedham; elevation, 320 feet	Dedham.
Fox; hill in Billerica; elevation, 300 feet	Lawrence. Lowell.
Fox Ledge; hill in Tyngsboro; elevation, 260 feet	Lowell.
Foxboro; town in Norfolk County; area, 22 square miles	Dedham. Franklin.

	Atlas sheets.
Foxboro; village in town of Foxboro	Franklin. Dedham.
Framingham; town in Middlesex County; area, 27 square miles.	Framingham.
Framingham and Lowell; branch of Old Colony R. R. system.	
Framingham Center; village in town of Framingham, on Old Colony R. R	Framingham.
Francis; hill on eastern boundary line of Westford	Lowell.
Franklin; town in Norfolk County; area, 29 square miles	Franklin.
Franklin; village in town of Franklin, on New York and New England R. R	Franklin.
Franklin Park; railroad station in Revere	Boston.
Freeland; brook in Blandford and Montgomery, 3¼ miles long.	Granville.
Freeman; brook in Webster	Webster.
Freeman; pond in Brewster	Wellfleet.
Freetown; an inland town in eastern part of Bristol County; area, 41 square miles.	Taunton. Middleboro. New Bedford.
French; brook in Boylston, tributary to Nashua River, 2 miles long	Marlboro.
French; hill in central part of Peru; elevation, 2,240 feet	Becket.
French; river in Oxford	Webster.
French; stream in west part of Rockland	Abington.
French Watering Place; village on south coast of Naushon Island, in town of Gosnold	Gay Head.
Fresh Brook; village in Wellfleet	Wellfleet.
Fresh; pond in Belmont and Cambridge	Boston.
Fresh; pond in Plymouth	Plymouth.
Fresh; pond in Dennis	Yarmouth.
Fresh; pond in southwestern part of Falmouth	Falmouth.
Fresh; river in western part of Hingham	Abington.
Freshwater Cove; village in Gloucester, on west side of head of Gloucester Harbor	Gloucester.
Frizzell; hill in Leyden; elevation, 1,343 feet	Greenfield.
Frizzell; mountain in southwestern part of Mount Washington; altitude, 2,420 feet	Sheffield.
Frost Fish; brook, principal tributary to Porter River, in eastern part of Danvers	Salem.
Frye; village in Andover	Lawrence.
Fryville; village in Orange	Winchendon.
Fuller; brook tributary to middle branch of Westfield River, in Peru and Worthington	Becket.
Fuller; brook in Hawley and Plainfield, tributary to Chickley River, 2 miles long	Hawley.
Furnace; branch of Jones River, in Kingston	Plymouth.
Furnace; pond in west part of Pembroke	Abington.
Furnace; pond in North Brookfield	Brookfield.
Furnace; pond in Middleboro	Middleboro.
Furnace; village in Orange	Winchendon.
Furnace; village in Easton	Dedham.
Further; creek on coast of Nantucket	Muskeget.
Gale; brook in Warwick	Warwick.
Gale; point on southern coast of Manchester at east entrance to Manchester Harbor	Salem.
Gallop; island east of north part of Long Island, Boston Bay.	Boston Bay.

	Atlas sheets.
Galloway; brook in Barre, 2 miles long	Barre.
Gallows; pond in Plymouth	Plymouth.
Gammon; point of Great Island	Barnstable.
Gannett Corners; village in west part of Scituate	Abington.
Gap Head; point on east coast of Rockport, east of Sandy Bay	Gloucester.
Gardner; lake on boundary line between Amesbury and Salisbury	Newburyport.
Gardner; village in town of Gardner, on Fitchburg R. R.	Fitchburg. Winchendon.
Gardner; town in Worcester County; area, 23 square miles	Winchendon. Fitchburg.
Gardener Neck; peninsula in southern part of Swansea between Cole and Lee rivers	Fall River.
Garfield; pond in southeastern part of Monterey	Sandisfield.
Gates; pond in town of Berlin	Marlboro.
Gates; brook in West Boylston, 3 miles long, tributary to Nashua River	Worcester.
Gates Crossing; village in Leominster	Marlboro.
Gay Head; town in Dukes County; area, 6 square miles	Gay Head.
Gay Head; point on northwest coast of Marthas Vineyard, so named from its bright-colored cliffs	Gay Head.
George; hill in town of Lancaster	Marlboro.
George; hill on boundary line between Grafton and Upton; elevation, 600 feet	Blackstone.
George; island in Boston Bay, east of Long Island	Boston Bay.
Georgetown; town in Essex County; area, 11 square miles	Salem. Lawrence.
Georgetown; village in town of same name	Salem.
German; hill in Yarmouth	Yarmouth.
Germantown; village in eastern part of Quincy	Boston Bay.
Gerry; island near the northeast coast of Marblehead	Salem.
Ghost; hill in Marlboro	Marlboro.
Gibbett; hill in Groton; elevation, 516 feet	Groton.
Gibbs; hill in Framingham	Framingham.
Gibbs; pond in Nantucket	Nantucket.
Gibbs Crossing; village in Ware	Palmer.
Gilbertville; village in Hardwick, on Boston and Albany R. R.	Barre.
Gill; town in Franklin County; area, 14 square miles	Greenfield. Warwick.
Gill; village in town of same name	Greenfield.
Gill Station; village in Northfield, on New London Northern R. R.	Warwick.
Gilson; brook in Westford, 1½ miles long; flows into Stony Brook.	Lowell.
Gilson; hill in Billerica; elevation, 320 feet	Lowell.
Glades, The; name applied to tract of low land in north part of Scituate	Abington.
Gleason; pond in Framingham	Framingham.
Glen; pond in Wareham	Plymouth.
Glen; brook in Leyden and Greenfield, 6 miles long; flows into Green River	Greenfield.
Glen Mills; village in northern part of Rowley	Salem.
Glendale; village in Stockbridge, on Housatonic R. R	Pittsfield.
Glenmen; pond in eastern part of Lynn	Boston Bay.
Globe; village in Southbridge	Brookfield.

	Atlas sheets.
Globe; brook tributary to Quinebang River, in Charlton, Sturbridge, and Southbridge	Brookfield.
Globe Village; village in southern part of Fall River	Fall River.
Gloucester; city in eastern part of Essex County, on Cape Ann. It took its name from Gloucester, England; area, 34 square miles	Gloucester.
Goat; hill in town of Hardwick; elevation, 986 feet	Barre.
Goat; island in Long Pond, in Lakeville	Middleboro.
Gobble Mountain; one of the Berkshire Hills, in Chester; elevation, 1,680 feet	Chesterfield.
Goddard; brook in Montague, 2 miles long; tributary to Saw Mill River	Greenfield.
Goddard; pond in Grafton	Blackstone.
Golden; hill in Haverhill; elevation, 253 feet	Haverhill.
Golden Cove; brook in Chelmsford, one-half mile long; tributary to River Meadow Brook	Lowell.
Goldthwait; brook tributary to North River, in southeastern part of Peabody, draining Cedar Pond	Salem.
Goodman; hill in Sudbury; elevation, 360 feet	Framingham.
Goodrich; pond in southeastern part of Pittsfield	Becket.
Goodrich Hollow; valley in Taconic Range in Hancock	Berlin.
Goods; hill in town of Northbridge	Blackstone.
Goose; pond on boundary line between Tyringham and Lee	Becket.
Goose; pond in Chatham	Yarmouth.
Goose; island in Slocum River, Dartmouth	New Bedford.
Goose; cove in northern coast of Gloucester at head of Annisquam Harbor	Gloucester.
Goose Branch; brook in Nashua and Attleboro tributary to Wading River; 2 miles long	Taunton.
Gooseberry; island in Poponesset Bay on southeast coast of Mashpee	Barnstable.
Gooseberry Neck; island in west entrance to Buzzards Bay off coast of Westport	Sakonnet.
Gore; pond in Charlemont and Dudley	Webster.
Goshen; town in Hampshire County; area, 15 square miles	Chesterfield.
Gosnold; town in Dukes County; area, 14 square miles	Gay Head. Falmouth.
Gosnold; pond in Cuttyhunk Island, Gosnold	Gay Head.
Goss; hill near western boundary line of Huntington	Chesterfield.
Governors; island in Boston Harbor	Boston.
Grace; brook in Warwick, 2¼ miles long; flows into Lake Moore.	Warwick.
Grace, Mount; hill in town of Warwick; elevation, 1,620 feet.	Warwick.
Grafton; town in Worcester County; area, 23 square miles	Blackstone.
Grafton; village in town of Grafton	Blackstone.
Granby; town in southern part of Hampshire County; area, 28 square miles.	Belchertown Springfield. Palmer. Northampton.
Granby; village in central part of Granby	Northampton.
Grand; cove in Dennis	Yarmouth.
Grandy; hill in western part of Wales; elevation, 1,140 feet	Brookfield.
Graniteville; village in Westford on Stony Brook R. R	Lowell.
Granny; hill in Lexington; elevation, 360 feet	Boston.
Granville; town in Hampden County: area, 41 square miles	Granville.

	Atlas sheets.
Granville; village in town of Granville	Granville.
Grape; hill on boundary line between Salisbury, Mass., and Seabrook, N. H.; elevation, 240 feet	Newburyport.
Grape; island north of Weymouth	Boston Bay.
Grass; hill in Millbury; elevation, 760 feet	Webster.
Grass; hill on line between Williamsburg and Whately; elevation, 440 feet	Northampton.
Grass; brook in Dunstable, tributary to Salmon Brook	Lowell.
Grass; pond in Westminster	Fitchburg.
Grass; pond in Harwich	Yarmouth.
Grassy; island in Taunton River	Taunton.
Grassy; pond in Dennis	Yarmouth.
Grassy; pond in northern part of Plymouth	Plymouth.
Grassy; pond in southern part of Plymouth	Plymouth.
Grassy; pond in Acton	Lowell.
Gravel; pond in southeastern part of Hamilton	Salem.
Graves; island off southern coast of Manchester	Gloucester.
Great; bay at head of Osterville Harbor on southwest coast of Barnstable	Barnstable.
Great; brook in Shelburne, 2 miles long, flows into Hawkes Brook	Greenfield
Great; brook in Southwick and Westfield, 7 miles long, tributary to Westfield River.	Granville. Springfield.
Great; brook flowing into Quaboag Pond in Brookfield	Brookfield.
Great; creek flowing from Great Marshes into Barnstable Harbor	Barnstable.
Great; harbor in Woods Holl between Long Neck Island and mainland	Falmouth.
Great; hill in Bridgewater; elevation, 160 feet	Middleboro.
Great; hill in north part of Weymouth	Abington.
Great; hill in Acton; elevation, 340 feet	Framingham.
Great; hill in Topsfield; elevation, 240 feet	Salem.
Great; hill on Great Neck, in Marion, 127 feet above sea level.	Falmouth.
Great; island in Great Quittacas Pond, Lakeville	Middleboro.
Great; island in east branch of Westport River, Westport	Fall River.
Great; island in Wellfleet, Barnstable County	Wellfleet.
Great; lake in eastern part of Otis	Sandisfield.
Great; pond on boundary line between Randolph and Braintree	Dedham.
Great; pond in North Andover	Lawrence.
Great; pond in Montague	Greenfield.
Great; pond in Brimfield	Brookfield.
Great; pond in Plymouth	Plymouth.
Great; pond in Wellfleet	Wellfleet.
Great; pond in Eastham	Wellfleet.
Great; pond about 2 miles long in southern part of Falmouth, opening into Vineyard Sound	Falmouth.
Great; pond in Barnstable	Barnstable.
Great; pond in southwest part of Weymouth	Abington.
Great; point on northeast extremity of Nantucket	Nantucket.
Great; swamp in Tewksbury	Lawrence.
Great; swamp lying between village of Brookfield and East Brookfield in town of Brookfield	Brookfield.
Great Barrington; large town in southwestern part of Berkshire County; area, 46 square miles.	Pittsfield. Sheffield.

	Atlas sheets.
Great Barrington; village and railway station in central part of town of same name on Housatonic River	Sheffield.
Great Beach; hill in Wellfleet	Wellfleet.
Great Blue; hill on western boundary line of Milton; elevation, 635 feet	Dedham.
Great Brewster; island in Boston Bay	Boston Bay.
Great Calf; island in Boston Bay	Boston Bay.
Great Cedar; swamp in north part of Halifax and south part of Hanson	Abington.
Great Cedar; swamp in Easton, Taunton, Bridgewater, and West Bridgewater	Taunton.
Great Cedar; swamp in New Bedford on line of Dartmouth	New Bedford.
Great Cedar; swamp in Halifax and Middleboro	Middleboro.
Great Drain; brook in southwestern part of Sunderland, emptying into Connecticut River	Northampton.
Great Duck; pond in Provincetown	Provincetown.
Great Egg Rock; islet about 1 mile south of Manchester	Gloucester.
Great Fawn; stone beacon east of Deer Island	Boston Bay.
Great Herring; pond in southern part of Plymouth	Plymouth.
Great Hill; point about one-half mile southeast of Great Hill in Plymouth, projecting into Buzzards Bay	Falmouth.
Great Indian; pond on western boundary of Kingston	Middleboro.
Great Island; peninsula on south side of Lewis Bay	Barnstable.
Great; marshes (salt) at head of Barnstable Harbor, 6 or 8 miles in extent	Barnstable.
Great Meadow; hill in Rehoboth; elevation, 263 feet	Taunton.
Great Mioxes; pond in Nantucket	Nantucket.
Great Misery; island about three-fourths mile southeast of Beverly	Salem.
Great Morse; hill in Huntington; elevation, 1,240 feet	Granville.
Great Neck; name given to land on southeast coast of Mashpee between Flat and Deans ponds	Barnstable.
Great Neck; point of land in southern part of Dartmouth in the bend of Slocum River	New Bedford.
Great Neck; peninsula in Nantucket	Nantucket.
Great Neck; peninsula in eastern part of Ipswich	Salem.
Great Rock; hill in Rehoboth; elevation, 248 feet	Providence.
Great Sandy Bottom; pond in west part of Pembroke	Abington.
Great Swamp; brook tributary to Mill Creek in northwestern part of Rowley	Salem.
Great Thatcher; island in Barnstable Harbor	Barnstable.
Great Tisbury; pond in southwestern part of town of Tisbury, Marthas Vineyard	Marthas Vineyard.
Green; river tributary to Housatonic River in western part of Great Barrington	Sheffield.
Green; river on boundary between Coleraine and Leyden and in Greenfield and Deerfield and in Vermont State, tributary to North River	Greenfield.
Green; river tributary to Hoosic River flowing northerly through western part of Berkshire County	Greylock.
Green; brook in Carver	Middleboro.
Green; creek in northeastern part of Ipswich, emptying into *Plum* River	Salem.

	Atlas sheets.
Green; harbor in eastern coast of Marshfield at mouth of Green Harbor River	Duxbury.
Green; hill in Blandford; elevation, 1,560 feet	Granville.
Green; hill in Sudbury; elevation, 320 feet	Framingham.
Green; pond in southern part of Falmouth, opening into Vineyard Sound	Falmouth.
Green; pond in Montague	Greenfield.
Green; point in Assawompsett Pond, Lakeville	Middleboro.
Green; island in Boston Bay	Boston Bay.
Green, The; village in Middleboro	Middleboro
Greenbush; railway station in southern part of Scituate	Duxbury.
Greenfield; town in Franklin County; area, 20 square miles	Greenfield.
Greenfield; village in town of Greenfield on Connecticut River R. R	Greenfield.
Greenfield; hill in Shelburne	Greenfield.
Green Harbor; marsh in eastern part of Marshfield	Duxbury.
Green Harbor; river in southern part of Marshfield	Duxbury.
Greenleaf; hill in Burlington; elevation, 260 feet	Boston.
Green Lodge; village in Dedham	Dedham.
Greenville; village in town of Leicester	Webster.
Greenville; reservoir near village of Greenville, town of Leicester	Webster.
Greenwater; pond in western part of Becket	Becket.
Greenwich; town in Hampshire County; area, 21 square miles	Belchertown.
Greenwich; village in town of same name	Belchertown.
Greenwood; village in Wakefield	Boston.
Greenwood; hill in Wakefield; elevation, 260 feet	Boston.
Greenwood; hill in town of Gardner; elevation, 1,260 feet	Fitchburg.
Grews; pond in southwestern part of Falmouth	Falmouth.
Greylock; mountain in western part of Adams; altitude, 3,505 feet, the highest point in the State	Greylock.
Griffin; brook in Richmond, 4 miles long	Pittsfield.
Griffin; island in Wellfleet	Wellfleet.
Griffith; pond in Brewster	Yarmouth.
Griswoldville; village in Coleraine	Greenfield.
Groton; town in Middlesex County; area, 39 square miles	Groton.
Groton; village in town of Groton on Boston and Maine R. R.	Groton.
Grover; cliff on northeast coast of Winthrop	Boston Bay.
Growl; hill in Auburn; elevation, 860 feet	Webster.
Groveland; town in Essex County; area, 7 square miles	Haverhill. Lawrence. Newburyport.
Groveland; village in town of same name	Haverhill.
Groveland; station on Georgetown branch of Boston and Maine R. R., town of Groveland	Haverhill.
Gulf; arm of Cohasset Cove on east coast of Cohasset	Abington.
Gulf; brook in Orange, flows into Millers River	Warwick.
Gulf; brook in town of Pepperell and in New Hampshire	Groton.
Gulf; island on east coast of Cohasset	Abington.
Gull; one of the Elizabeth Islands, Gosnold	Gay Head.
Gull; island in Snipatuit Pond, Rochester	Middleboro.
Gull; pond in Wellfleet	Wellfleet.
Gunners Exchange; pond in Plymouth	Plymouth.

	Atlas sheets.
Gunning; point on southwestern coast of Falmouth	Falmouth.
Gurnet; southeastern point of peninsula east of Duxbury, Plymouth	Duxbury.
Gurnet; light-house on Gurnet Point, Plymouth	Duxbury.
Gurney Corners; village in east part of Hanson	Abington.
Gushee; pond in Raynham	Taunton.
Hacker; pond in New Salem	Warwick.
Hadley; harbor between Uncatena and Monamesset Islands	Falmouth.
Hadley; town in northern part of Hampshire County; area, 22 square miles	Northampton.
Hadley; village in southwestern part of Hadley on Connecticut River	Northampton.
Haggett; pond in Andover	Lawrence.
Haggett; station on Lawrence branch of Boston and Lowell R. R. in Andover	Lawrence.
Half Moon; island north of Quincy in Boston Bay	Boston.
Halfway; pond in eastern part of Barnstable	Barnstable.
Halfway; pond in Yarmouth	Yarmouth.
Halibut; point at northern extremity of Cape Ann, Rockport	Gloucester.
Halifax; town in Plymouth county; area, 18 square miles	Abington.
Halifax; village in town of same name	Middleboro.
Hall; brook in northern part of Kingston, emptying into Blackstone Pond	Duxbury.
Hamant; brook, right branch of Quinebaug River in Sturbridge	Brookfield.
Hamilton; town in eastern part of Essex County; area, 15 square miles	Salem.
Hamilton; reservoir in Holland	Brookfield.
Hamilton; village in eastern part of town of same name	Salem.
Hamilton; station in eastern part of town of same name	Salem.
Hamlin; point on southwestern coast of Falmouth	Falmouth.
Hammond; brook in Wareham	Middleboro.
Hammond; hill in Charlton; elevation, 880 feet	Webster.
Hammond; pond in Newton	Boston.
Hampden; town in Hampden county; area, 18 square miles	Palmer.
Hampden; village in town of same name	Palmer.
Hampton; pond in Westfield and Southampton	Springfield.
Hancock; brook in Hancock and Williamstown, tributary to Hoosic River	Berlin.
Hancock; hill in Milton; elevation, 540 feet	Dedham.
Hancock; town in Berkshire County; area, 36 square miles	Pittsfield. Berlin.
Hancock; village in town of same name	Berlin.
Hanging; mountain in north part of Westhampton	Chesterfield.
Hanging; mountain in southeastern part of Sandisfield; altitude, 1,294 feet	Sandisfield.
Hangman; island in south part of group of islands in Boston Bay	Boston Bay.
Hanover; town in Plymouth County; area, 16 square miles	Abington.
Hanover Four Corners; village in southeast part of Hanover	Abington.
Hanson; town in Plymouth County; area, 16 square miles	Abington.
Hanson; village in central part of town of same name	Abington.
Harbor; pond in town of Townsend	Groton.
Harbor Bluff; slight projection at southeast part of Barnstable County, extending into Lewis Bay	Barnstable.

	Atlas sheets.
Harding; sand beach in Chatham, facing Vineyard Sound	Chatham.
Harding Beach Light; a fourth-order fixed white light; lantern 45 feet above sea level; visible 12 miles	Chatham.
Hardwick; town in Worcester County; area, 41 square miles.	Barre. Belchertown.
Hardwick; village in town of Hardwick	Barre.
Harlow; pond in northern part of Plymouth	Plymouth.
Harmon; pond, on boundary line between Sheffield and Egremont	Sheffield.
Harmon; pond in western part of New Marlboro	Sandisfield.
Harris; hill in New Salem; elevation, 1,000 feet	Warwick.
Harris; pond in Blackstone	Blackstone.
Harris; pond in Warwick	Warwick.
Harrison Square; part of the city of Boston	Boston.
Harrisville; village in town of Winchendon	Winchendon.
Harrisville; village in West Boylston, on Massachusetts Central R. R	Worcester.
Harry Rocks; rocks east of Peddock Island, in Boston Bay	Boston Bay.
Haft; pond in Chelmsford and Westford	Lowell.
Hartsville; village in northern part of New Marlboro, on Mill River	Sheffield.
Hartwell; brook in Bedford, 2 miles long	Framingham.
Hartwell; brook in Charlemont, tributary to Deerfield River	Hawley.
Harvard; station on Boston and Maine R. R., in town of Harvard	Groton.
Harvard; town in Worcester County; area, 30 square miles	Groton. Marlboro.
Harvard Center; village in town of Harvard	Groton.
Harvard College, in Cambridge	Boston.
Harvey; mountain on western boundary of West Stockbridge; altitude, 2,065 feet	Pittsfield.
Harwich; village in town of Harwich	Yarmouth.
Harwich; town in Barnstable County; area, 23 square miles	Yarmouth.
Harwichport; village in town of Harwich	Yarmouth.
Haskell; swamp in southern part of Rochester	New Bedford.
Haskins; railway station on Old Colony R. R., Fall River branch	Middleboro.
Hastings; pond in Warwick	Warwick.
Hatch; creek on boundary between Wellfleet and Eastham	Wellfleet.
Hatchet; brook, right-hand branch of Quinebaug River, in Sturbridge	Brookfield.
Hatchville; village in northern part of Falmouth	Falmouth.
Hatfield; town in central part of Hampshire County, on Connecticut River; area, 17 square miles	Northampton.
Hatfield; village in southeastern part of Hatfield, on Connecticut River	Northampton.
Hathaway; brook in Lakeville	Middleboro.
Havenville; village in Burlington	Lawrence.
Haverhill; city in Essex County; area, 28 square miles	Haverhill.
Haverhill; village in town of same name, on Boston and Maine R. R	Haverhill.
Hawes; hill in town of Barre; elevation, 1,227 feet	Barre.
Hawk; mountain on northern boundary of Hawley; altitude, 1,870 *feet*	Hawley.
***Hawkes**; brook in Methuen*	Haverhill.

	Atlas sheets.
Hawkes; brook in Shelburne, 2 miles long; flows into Dragon Brook	Greenfield.
Hawkes; brook in Lynnfield and Saugus, about 3 miles long, and tributary to Saugus River.	Lawrence. Boston.
Hawley; town in Franklin County; area, 32 square miles	Hawley.
Hawley; village in town of same name	Hawley.
Hayden; pond in Dudley	Webster.
Hayden Row; village in town of Hopkinton	Blackstone.
Haydenville; village in southern part of Williamsburg, on Mill River	Northampton.
Hayes; pond in northwestern part of Otis	Sandisfield.
Haynes; hill in northern part of Wales; elevation, 1,080 feet	Brookfield.
Haystack; mountain in western part of Norfolk	Sandisfield.
Hayward; brook in Wayland and Weston, 1½ miles long; flows into Sudbury River	Framingham.
Hayward; creek in southeast part of Quincy	Abington.
Hazlewood; village in Hyde Park	Boston.
Hazzard; pond in Russell	Granville.
Head of the Harbor; head of Nantucket Harbor, on coast of Nantucket	Nantucket.
Head of Hummock; pond in Nantucket	Nantucket.
Head of Westport; village in eastern part of Westport, on Westport River	Fall River.
Heald; pond in Pepperell	Groton.
Heartbreak; hill in southeastern part of Ipswich; elevation, 160 feet	Salem.
Heath; town in Franklin County; area, 25 square miles	Hawley.
Heath; brook in Tewksbury, 1 mile long	Lawrence.
Heath; village in town of same name	Hawley.
Heathen Meadow; brook in Boxford, Acton, and Stow	Framingham. Marlboro.
Hebronville; village in Attleboro, on Boston and Providence R. R	Providence.
Heird; pond in Wayland	Framingham.
Hell; pond in Harvard	Groton.
Hemlock; mountain in Northfield	Warwick.
Hemlock; point in Long Pond in Freetown	Middleboro.
Hermon; mountain on western boundary of Gill; altitude, 440 feet	Warwick.
Herring; brook in Carver, one-half mile long, tributary to South Meadow Brook	Middleboro.
Herring; brook in north part of Pembroke	Abington.
Herring; pond in Wellfleet	Wellfleet.
Herring; pond in town of Eastham	Wellfleet.
Herring; pond in Edgartown, Marthas Vineyard	Marthas Vineyard.
Herring; pond in western part of Falmouth	Falmouth.
Herring; river in Brewster; flows into Cape Cod Bay	Wellfleet.
Herring; river in town of Eastham; flows into Cape Cod Bay.	Wellfleet.
Herring; river in Wellfleet, 4 miles long; flows into Wellfleet River	Wellfleet.
Herring; river in Harwich, 5 miles long; flows into Nantucket Sound	Yarmouth.
Hibbard; brook in Leyden, 1½ miles long, tributary to Green River	Greenfield.

	Atlas sheets.
Hickory; mountain in northwestern part of Huntington	Chesterfield.
Hicks; pond in Charlton	Webster.
Hicksville; village in northwestern part of Dartmouth	Fall River.
Higgins; island in Barnstable Harbor	Barnstable.
Higgins; pond in Wellfleet	Wellfleet.
Higgins; pond in Truro	Wellfleet.
Higgon; cape on coast of Chilmark, Marthas Vineyard	Gay Head.
High; hill in Ludlow; elevation, 600 feet	Palmer.
High Bush; island in Snipatuit Pond, Rochester	Middleboro.
High Cliff; bluff on east coast at entrance to Plymouth Harbor, town of Plymouth	Plymouth.
High Head; life-saving station upon Atlantic coast of Truro	Provincetown.
High Knob; hill in Athol; elevation, 980 feet	Winchendon.
High Ridge; mountain in northeastern part of Williamsburg; altitude, 1,484 feet	Northampton.
High Rock; picturesque cliff in city of Lynn	Boston Bay.
High Rock; hill in Needham, elevation, 240 feet	Boston.
High Rock; hill in Brookfield; altitude, 760 feet	Brookfield.
Higher; brook in Ludlow and Chicopee	Palmer. Springfield.
Highland; life-saving station upon Atlantic coast of Truro	Provincetown.
Highland; village in Norfolk, on New York and New England R. R	Franklin.
Highland Light; life-saving station upon Atlantic coast of Truro	Provincetown.
Highland Station; village in Boston, on Boston and Providence R. R	Boston.
Highlandville; village in Needham, on Woonsocket division on New York and New England R. R	Boston.
Highlands; village in Cottage City, Marthas Vineyard	Marthas Vineyard.
Highlands; elevated section of country in northeastern part of Marshfield	Duxbury.
Highlands; hill in Merrimac; elevation, 270 feet	Haverhill.
Hill; brook in north part of Kingston	Abington.
Hill; pond in Woburn	Boston.
Hill Crossing; railway station in Belmont, on Massachusetts Central R. R	Boston.
Hillsville; village in town of Spencer	Barre.
Hinckley; pond in Barnstable	Barnstable.
Hinckley; pond in Harwich	Yarmouth.
Hingham; harbor on north coast of Hingham	Boston Bay. Abington.
Hingham; town in Plymouth County; area, 26 square miles	Abington. Boston Bay.
Hingham Center; village in Hingham	Abington.
Hinsdale; town in eastern part of Berkshire County; area, 20 square miles	Becket.
Hinsdale; village in western part of Hinsdale	Becket.
Hinsdale; brook in Coleraine, Shelburne, and Greenfield; flows into Allan Brook	Greenfield.
Hitchcock; mountain in Wales; altitude, 1,160 feet	Palmer.
Hitchcock; pond in Holyoke	Springfield.
Hither; creek on Nantucket	Muskeget.
Hobb; brook, left branch of Quinebaug River, in Sturbridge	Brookfield.

	Atlas sheets.
Hobb; brook in Lincoln, Waltham, and Weston	Framingham.
Hobomak; pond in south central part of Pembroke	Abington.
Hookanum; hill in Warwick; elevation, 1,120 feet	Warwick.
Hockanum; village in southwestern part of Hadley, on Connecticut River	Northampton.
Hockomock; river in West Bridgewater	Dedham.
Hocomonco; pond in Westboro	Marlboro.
Hodge; brook in Warwick, 2 miles long; tributary to Gales Brook	Warwick.
Hodge; brook in Mansfield and Norton; tributary to Wading River.	Dedham. Taunton.
Hodge; pond in northern part of Plymouth	Plymouth.
Hodge; pond in southern part of Plymouth	Plymouth.
Hodge; village in Oxford, on Boston and Albany R. R	Webster.
Hog; brook in Hudson and Berlin, 1½ miles long; tributary to Assabet River	Marlboro.
Hog; island off north coast of Orleans	Chatham. Wellfleet.
Hog; island in large marsh near mouth of Essex River, Essex.	Salem.
Hog; island in northern part of Buzzards Bay, off east coast of Wareham	Falmouth.
Hog; ponds in Sandwich	Barnstable.
Hog; mountain in Buckland; altitude, 1,540 feet	Hawley.
Hog Island; harbor on western coast of Falmouth	Falmouth.
Hog Island; point on western coast of Falmouth	Falmouth.
Hog Neck; on southeastern coast of Wareham, extending about one-half mile into the bay	Falmouth.
Holbrook; town in Norfolk County; area, 7 square miles	Abington. Dedham.
Holbrook; village in town of same name	Abington.
Holden; town in Worcester County; area, 36 square miles	Worcester.
Holden; pond near central part of Lynn	Boston Bay.
Holden; reservoir in town of Holden	Worcester.
Holden Center; village in Holden, on Boston, Barre, and Gardner R. R	Worcester.
Holland; town in Hampden County; area, 14 square miles	Brookfield.
Holland; principal village in town of same name	Brookfield.
Holland; pond in northern part of Holland	Brookfield.
Holliston; town in Middlesex County; area, 20 square miles	Franklin.
Holliston; village in town of same name, on Boston and Albany R. R	Franklin.
Hollow; brook, tributary to Quinebaug River, in Wales and Brimfield	Brookfield.
Holmes; point projecting into Plymouth Harbor	Plymouth.
Holt; hill in Andover; elevation, 400 feet	Lawrence.
Holy; island in northeastern part of Ipswich, in Rowley River.	Salem.
Holyoke; city in Hampden County; area, 18 square miles	Springfield.
Holyoke; village in town of same name, on Connecticut River R. R	Springfield.
Holyoke; mountain in northwestern part of South Hadley; altitude, 954 feet	Northampton.
Holyoke; range of mountains in south central part of Hampshire County.	Belchertown. Northampton.
Hood; pond in southwestern part of Ipswich, on line of Topsfield	Salem.

	Atlas sheets.
Hoop Pole; cove in northwestern part of Rockport	Gloucester.
Hoop Pole; hill in north part of Scituate	Abington.
Hoop Pole; swamp in central part of South Scituate	Abington.
Hopper; pond in Plymouth	Plymouth.
Hoosac; mountain trending north and south in northeastern part of Berkshire County	Greylock.
Hoosac; tunnel on Fitchburg R. R. through Hoosac mountain from Deerfield River to valley of Hoosic River.	Greylock. Hawley,
Hoosic; river flowing through Berkshire County into State of Vermont	Greylock.
Hop; brook in Shrewsbury and Northboro, 2 miles long	Marlboro.
Hop; brook in Framingham	Framingham.
Hop; brook in Sudbury	Framingham.
Hop; brook in New Salem, 3 miles long; flows into Hop Brook Pond	Belchertown.
Hop; brook in Mendon and Blackstone, tributary to Mill River	Blackstone.
Hop; brook in Tyringham, Otis and Lee, 7 miles long, tributary to Housatonic River.	Becket. Sandisfield.
Hop Brook; pond in New Salem	Belchertown.
Hopedale; town in Worcester County; area, 6 square miles	Blackstone.
Hopedale; village in town of same name	Blackstone.
Hopkins; island in Town Cove	Wellfleet.
Hopkins; pond in Wellfleet	Wellfleet.
Hopkinton; town in Middlesex County; area, 25 square miles	Marlboro. Blackstone.
Hopkinton; village in town of same name	Blackstone.
Hopper, the; deep chasm in side of Mount Greylock, in southeastern part of Williamsburg	Greylock.
Hopping; brook in Holliston and Medway	Franklin.
Horn; pond in eastern part of Becket	Becket.
Horn; pond in Woburn	Boston.
Horn Pond; brook between Horn Pond and Winter Pond, in Woburn and Winchester, one-half mile long	Boston.
Horn Pond; hill in Woburn; elevation, 240 feet	Boston.
Horner; pond in town of Tisbury, Marthas Vineyard	Marthas Vineyard.
Horse; pond in Westfield	Springfield.
Horse; pond in North Brookfield	Barre.
Horse; hill on boundary line between Dunstable and Groton; elevation, 370 feet	Groton.
Horse; hill in southeast part of Huntington	Chesterfield.
Horse; island on west coast of Wellfleet	Wellfleet.
Horse; mountain on line between Williamsburg and Hatfield; altitude, 780 feet	Northampton.
Horse Neck; beach in mouth of Westport River, Westport	Fall River.
Horse Neck; brook in Carver, one-half mile long, tributary to South Meadow Brook	Middleboro.
Horse Race; island in Connecticut River	Greenfield.
Hospital; hill in Berkley	Taunton.
Hough Neck; in north part of Quincy	Boston.
Houghton; pond in Milton	Dedham.
Housatonic; village in Great Barrington on Housatonic R. R.	Pittsfield.
Housatonic; part of New York, New Haven and Hartford Railroad system running northward up the Housatonic Valley to Pittsfield.	

	Atlas sheets.
Housatonic; river, heading in western part of State and flowing southerly, crosses Connecticut into Long Island Sound.	Becket. Pittsfield. Greylock. Sheffield.
House; brook in Chelmsford and Carlisle, one-half mile long; tributary to River Meadow Brook	Lowell.
House; island about one-half mile south of entrance to Manchester Harbor	Salem.
House Point; island in Provincetown Harbor	Provincetown.
Howard; brook in southeast part of Pembroke	Abington.
Howard; brook in Northboro; flows into Assabet River	Marlboro.
Howe; hill in Gardner; elevation, 1,240 feet	Fitchburg.
Howe; station on Salem and Lawrence R. R. in eastern part of Middleton	Salem.
Howland; station on Old Colony R. R., in Lakeville	Middleboro.
Howlet; brook tributary to Mile Brook in Topsfield	Salem.
Hovey; pond in Boxford	Lawrence.
Hoxie; creek tributary to Hoosic River, in western part of Adams	Greylock.
Hubbard; brook in Tolland and Granville 4 miles long	Granville.
Hubbard; brook tributary to Housatonic River, flowing through Mill Pond in Sheffield	Sheffield.
Hubbard Corners; village in Agawam	Springfield.
Hubbardston; town in Worcester County; area, 53 square miles.	Worcester. Winchendon. Barre. Fitchburg.
Hubbardston; principal village in town of same name	Barre.
Hudson; town in Middlesex County; area, 13 square miles	Framingham. Marlboro.
Hudson; village in town of same name on Massachusetts Central R. R. and Fitchburg R. R., Marlboro branch	Marlboro.
Hudson; brook tributary to north branch Hoosic River, in Clarksburg	Greylock.
Hull; town in Plymouth County; area, 3 square miles	Boston Bay.
Hummock; pond in Nantucket	Nantucket.
Humphrey; island in Suntaug Lake, Peabody	Lawrence.
Hunger, Mount; in town of Ashburnham; altitude, 1,420 feet.	Fitchburg.
Hunt Hill; point on northwest coast of Weymouth	Abington.
Hunter; hill in Dighton; elevation, 160 feet	Taunton.
Hunting; brook in Royalston	Winchendon.
Hunting; hill in Lunenburg and Shirley; elevation, 542 feet	Groton.
Hunting House; brook in Carver, 1 mile long	Middleboro.
Huntington; town in Hampshire County; area, 27 square miles.	Chesterfield. Granville.
Huntington; village in town of same name on Boston and Albany R. R	Granville.
Huy Slow; hill in central part of Rowley; elevation, 160 feet.	Salem.
Hyannis; village in Barnstable, on Cape Cod branch Old Colony R. R	Barnstable.
Hyannis; harbor in south part of Barnstable	Barnstable.
Hyannis Light; fixed, red light at north part of Hyannis Harbor; lantern 22 feet above sea level	Barnstable.
***Hyannis**; point at southern extremity of Squam Island, in Barnstable*	Barnstable.

	Atlas sheets.
Hyannis Port; village in Barnstable	Barnstable.
Hyde Park; town in Norfolk County; area, 5 square miles	Boston.
Hyde Park; village in town of same name on New York and New England R. R.	Boston. Dedham.
Hydeville; village in town of Winchendon	Winchendon.
Ilsley; hill in West Newbury; elevation, 200 feet	Newburyport.
Indian; brook in Hopkinton	Blackstone. Marlboro.
Indian; hill on coast of Plymouth; elevation, 80 feet	Plymouth.
Indian; hill in Billerica; elevation, 200 feet	Lawrence.
Indian; hill in north part of Lynn	Boston Bay.
Indian; hill in West Newbury	Newburyport.
Indian; hill in Tisbury, Marthas Vineyard; elevation, 264 feet	Marthas Vineyard.
Indian; hills in Groton; elevation, 460 to 480 feet; three in number	Groton.
Indian; river in West Newbury, 3 miles long, flows into Merrimac river	Newburyport.
Indian Branch; stream flowing into Cape Cod Bay from Plymouth	Plymouth.
Indian Head; brook in east part of Hanson	Abington.
Indian Head; hill in Marlboro; elevation, 420 feet	Marlboro.
Indian Head; pond in eastern part of Hanson	Abington.
Indian Head; river in northern part of Hanson	Abington.
Indian Meeting House; church in Mashpee	Barnstable.
Indian Neck; extending into Wellfleet Harbor in Wellfleet	Wellfleet.
Indian Orchard; village in Springfield, on Springfield, Athol and Northern R. R	Springfield.
Independence; fort on Castle Island, in Boston Harbor	Boston.
Ingall; station on Salem and Lawrence R. R., in North Andover.	Lawrence.
Ingleside; station on New Haven and Northampton R. R., in Holyoke	Springfield.
Ingraham; hill in northwestern part of Leverett	Northampton.
Inman; hill in town of Mendon; elevation, 480 feet	Blackstone.
Inward; northern point of entrance of Wreck Cove, Monomoy Island	Chatham.
Ipswich; seaboard town on eastern coast of Essex County; area, 41 square miles	Salem.
Ipswich; village near central part of town of same name	Salem.
Ipswich; river in counties of Essex and Middlesex, is 30 miles long and empties into Atlantic Ocean.	Lawrence. Salem.
Ipswich; light-house on northern coast of Castle Neck, Ipswich	Salem.
Ireland; parish in Holyoke	Springfield.
Ironstone; village in Uxbridge on Providence and Worcester R. R	Blackstone.
Ironstone; reservoir in Uxbridge and State of Rhode Island	Blackstone.
Iron Works; village in northern part of Bridgewater	Abington.
Iron Works; brook tributary to Housatonic River in eastern part of Sheffield, draining Three Mile Pond	Sheffield.
Island; creek in southern part of Duxbury, draining Island Creek Pond	Duxbury.
Island; pond in southern part of Plymouth	Plymouth.
Island; pond in Plymouth	Plymouth.

	Atlas sheets.
Island Creek; pond about one-half mile long in southern part of Duxbury, of which Island Creek forms an outlet into Kingston Bay	Duxbury.
Islington; village in town of Dedham	Dedham.
Israel; pond in eastern part of Barnstable	Barnstable.
Jabish; brook in Belchertown, tributary to Swift River	Palmer.
Jabish; river in Hampshire County	Belchertown.
Jack; brook in Erving and Northfield, 2½ miles long; flows into Keyup Brook	Warwick.
Jackson; hill in western part of Blandford; elevation, 1,680 feet	Sandisfield.
Jacob; hill in Royalston; elevation, 1,100 feet	Winchendon.
Jacob; pond in west part of South Scituate	Abington.
Jacob Neck; peninsula on southeastern coast of Wareham, between Onset Bay and Cohasset Narrows	Falmouth.
Jamaica; pond in Berkshire	Boston.
Jamaica Plain; village in city of Boston	Boston.
James; brook in Ayer and Groton, 3½ miles long; tributary to Nashua River	Groton.
James; pond in Yarmouth	Yarmouth.
James; pond in Tisbury, Marthas Vineyard; opens into Lambert Cove	Marthas Vineyard.
Jamesville; village in Worcester on Boston and Albany R. R.	Webster.
Jefferson; peak in Ludlow	Palmer.
Jeffersonville; village in Holden on Boston, Barre and Gardner R. R	Worcester.
Jenk; reservoir in Bellingham	Franklin.
Jenkin; pond in central part of Falmouth	Falmouth.
Jenkin Hole; pond in Plymouth	Plymouth.
Jenning; pond on eastern boundary of Natick	Framingham.
Jericho; hill in Marlboro; elevation, 560 feet	Marlboro.
Jerusalem; village in northwest part of Cohasset	Boston Bay.
Jewell; hill in Ashburnham; elevation, 1,460 feet	Fitchburg.
Jewett; hill in northern part of Ipswich; elevation, 180 feet	Salem.
Job; hill in Haverhill	Haverhill.
Job Neck; pond in Edgartown, Marthas Vineyard	Marthas Vineyard.
Joe Rock; hill in Wrentham; elevation, 486 feet	Franklin.
John; pond in eastern part of Mashpee, drained by Child River into Waquoit Bay, containing 240 acres.	Barnstable. Falmouth.
John; pond in southeast part of Mashpee	Barnstable.
Johnson; creek tributary to Wareham River, emptying into same from the west about 1 mile above its mouth in Plymouth County.	Plymouth. Falmouth.
Johnson; hill in Buckland; elevation, 900 feet	Hawley.
Johnson; pond in southwest part of Groveland	Lawrence.
Joice; creek in Yarmouth, 1 mile long; flows into Chase Garden Creek	Yarmouth.
Joint Grass; brook in Dunstable	Groton.
Jonathan; pond in Wareham	Plymouth.
Jones; hill in Ashby; elevation, 1,220 feet	Fitchburg.
Jones; river in northern part of Gloucester, emptying into Squam River	Gloucester.
Jones; river in Plympton and Kingston	Plymouth. Middleboro.

	Atlas sheets.
Jones River; brook in Plympton, 4 miles long; tributary to Jones River	Middleboro.
Joppa Flats; shallows at mouth of Merrimac River	Newburyport.
Jordan; pond in Shrewsbury	Marlboro.
Jordansville, or East Windsor; village in southeast part of Windsor	Chesterfield.
Jayner Marsh; pond in central part of Egremont	Sheffield.
Jug End; north end of Mount Bushwell, Egremont	Sheffield.
Juniper; hill in Ashby	Fitchburg.
Juniper; pond in northwestern part of New Marlboro	Sheffield.
Justice; brook in Leominster and Sterling, 3 miles long; tributary to Stillwater River	Worcester.
Katama; village on Marthas Vineyard	Marthas Vineyard.
Katama; bay between Chappaquiddick Island and the mainland of Eagartown, Marthas Vineyard	Marthas Vineyard.
Katama; point on east coast of Edgartown, Marthas Vineyard.	Marthas Vineyard.
Kearney; brook in south part of Cummington	Chesterfield.
Keen; brook in west part of Duxbury	Abington.
Keen; creek tributary to South River in western part of Duxbury	Duxbury.
Keith; mountain peak in central part of Great Barrington; altitude 1,592 feet	Sheffield.
Keith; hill in Grafton; elevation, 620 feet	Blackstone.
Kelley; bay on western boundary of Dennis, opens into Bass River	Yarmouth.
Kelley; pond in Dennis	Yarmouth.
Kendall; hill in town of Gardner; elevation, 1,120 feet	Fitchburg.
Kendall; hill in Dunstable; elevation, 320 feet	Lowell.
Kendall; hill in town of Sterling; elevation, 500 feet	Marlboro.
Kendall; pond in Gardner	Winchendon.
Kendall Green; village on Fitchburg R. R. in Weston	Framingham.
Kenoza; lake in Haverhill	Haverhill.
Kettle; brook in Auburn	Webster.
Kettle; cove in Nanshon Island in town of Gosnold	Gay Head.
Kettle; cove in northwestern coast of Manchester	Gloucester.
Kettle; island about one-half mile off southeast coast of Manchester	Gloucester.
Key; brook in Westford, 2 miles long; has its source in Key Pond and flows into Stony Brook	Lowell.
Key; pond in Westford	Lowell.
Keyes; brook in Princeton	Worcester.
Keyup; brook in Erving and Northfield, 5 miles long; flows into Connecticut River	Warwick.
Kickamuit; river in Swansea	Taunton.
Kidder; brook in Warwick, 1 mile long; unites with Mountain Brook	Warwick.
Kidd Lookout; hill in southeast part of Chesterfield	Chesterfield.
Kiln; brook in Bedford and Lincoln	Framingham.
Kimball; hill in Haverhill; elevation, 204 feet	Haverhill.
Kimball; island in Merrimac River	Haverhill.
Kimball; pond on western boundary of Amesbury	Newburyport.
King; brook in Hawley and Plainfield, 3 miles long, flows into Chickley River	Hawley.
King; brook in Palmer, 3 miles long, tributary to Chicopee River	Palmer.

	Atlas sheets.
King; pond in northern part of Plymouth	Plymouth.
King; pond in Raynham	Taunton.
King Oak; hill in north part of Weymouth	Abington.
Kingsbury; mountain in northwestern part of Otis; altitude, 1,960 feet	Sandisfield.
Kingsbury; pond in Norfolk	Franklin.
Kingston; seaboard town in Plymouth County; area, 21 square miles.	Plymouth. Duxbury. Abington. Middleboro.
Kingston; principal village in town of same name	Plymouth.
Kingston; bay on southeast coast of Duxbury	Duxbury.
Kneeland; brook in Gardner	Winchendon. Fitchburg.
Knickup; hill in Wrentham; elevation, 360 feet	Franklin.
Knightsville; village in west part of Huntington	Chesterfield.
Knop; pond in Groton	Groton.
Knubble; peninsula in southwestern part of Westport, at mouth of Westport River	Fall River.
Konkapot; brook in Great Barrington and Stockbridge; tributary to Housatonic River	Pittsfield. Sheffield.
Labor in Vain; creek in Dighton and Somerset, 2 miles long, tributary to Cranston River	Taunton.
Labor in Vain; creek tributary to Ipswich River, in eastern part of Ipswich	Salem.
Lagoon; pond on western boundary of Cottage City, Marthas Vineyard	Marthas Vineyard.
Lake Crossing; station on Boston and Albany R. R. in Wellesley	Framingham.
Lakeville; town in Plymouth County; area, 29 square miles	Middleboro. Taunton.
Lakeville; village in town of same name	Middleboro.
Lakey; bay between Nonamesset Island and Naushon Island	Falmouth.
Lambert; cove on north coast of Tisbury, Marthas Vineyard	Marthas Vineyard.
Lancaster; town in Worcester County; area, 39 square miles	Groton. Marlboro.
Lancaster; village in town of same name	Marlboro.
Lancaster Commons; village in town of Lancaster	Marlboro.
Landham; brook in Sudbury	Framingham.
Lane; pond in Lunenburg	Groton.
Lane; village in town of Ashburnham	Fitchburg.
Lanesboro; town in northwestern part of Berkshire County; area, 30 square miles.	Berlin. Pittsfield. Greylock.
Lanesboro; village in southern part of town of same name	Greylock.
Lanesville; village in northwestern part of Gloucester	Gloucester.
Lanesville; village in Attleboro	Providence.
Larkin; pond in Otis	Springfield.
Larned; pond in Dudley	Webster.
Larned; pond in Framingham	Framingham.
Larnedville; village in Oxford	Webster.
Laundry; brook in Newbury, tributary to Charles River	Boston.
Laura Tower; hill in Stockbridge; elevation, 1,565 feet	Pittsfield.

	Atlas sheets.
of the Taconic range in Lanesboro	Berlin.
e on boundary between Lee and Lenox	Pittsfield.
city in Essex County; area, 8 square miles	Lawrence.
'brook in Tyngsboro, 2 miles long	Lowell.
brook in Royalston and Orange	Winchendon.
pond in Sandwich	Barnstable.
ıntain in southeastern part of Essex; altitude, 160	Salem.
d on southern boundary of Sharon	Dedham.
; brook below Lead Mine Pond in southern part of lge	Brookfield.
; mountain in southern part of Sturbridge; altitude,	Brookfield.
; pond in southern part of Sturbridge	Brookfield.
ırook tributary to Quinebaug River in Sturbridge	Brookfield.
ills; village in Seekonk, on Ten Mile River	Providence.
near southern boundary of Dracut	Lowell.
ainous town in central part of Berkshire County; square miles.	Pittsfield. Becket.
ɔ in central part of town of same name	Pittsfield. Becket.
n central part of Mount Washington	Sheffield.
orming part of boundary line between Somerset and nsea and flowing into Mount Hope Bay	Fall River.
brook in Mount Washington, flowing northwest into 'k	Sheffield.
d in northern part of Plymouth	Plymouth.
ge in northwestern part of Northampton, on Mill	Northampton.
l in Charlemont; elevation, 1,848 feet	Hawley.
town in Worcester County; area, 25 square miles.	Worcester. Webster.
village in town of same name	Webster.
l in Sutton; elevation, 660 feet	Blackstone.
ıntain in Lenox; elevation, 1,880 feet	Pittsfield.
'n in western part of Berkshire County; area, 22 ıiles	Becket.
age in town of same name	Pittsfield.
way station in eastern part of town of same name.	Becket.
ıace; village in southeastern part of Lenox	Becket.
; town in Worcester County; area, 20 square miles.	Groton. Marlboro. Worcester. Fitchburg.
; principal village in town of same name, on Old R. R., Fitchburg branch	Fitchburg.
ond in Rochester	Middleboro.
own in southern part of Franklin County; area, e miles.	Belchertown. Northampton. Warwick. Greenfield.
ınter; village in southwestern part of Leverett	Northampton.
ok in Swansea	Taunton.

	Atlas sheets.
Lewis; bay at southwest part of Yarmouth, opening into Nantucket Sound.	Yarmouth. Barnstable.
Lewis; pond in Yarmouth	Yarmouth.
Lewis; pond in eastern part of Barnstable	Barnstable.
Lewis; island in Long Pond in Lakeville	Middleboro.
Lewis Neck; narrow point of land in southern part of Falmouth, between Green Pond and Great Pond	Falmouth.
Leyden; town in Franklin County; area, 19 square miles	Greenfield.
Leyden Center; village in town of same name	Greenfield.
Lexington; town in Middlesex County; area, 17 square miles.	Boston. Framingham.
Lexington; village in town of same name on Boston and Lowell R. R	Boston.
Liberty; hill in Granville; elevation, 1,437 feet	Granville.
Liberty Plain; village in south part of Hingham	Abington.
Lily; pond in Cohasset	Abington.
Lily; pond in Northfield	Warwick.
Lilly; pond in Yarmouth	Yarmouth.
Lincoln; town in Middlesex County; area, 15 square miles	Framingham.
Lincoln; village in town of same name	Framingham.
Lincoln; mountain in Pelham; elevation, 1,240 feet	Belchertown.
Linden; village in Malden and Revere	Boston.
Linebrook; village in western part of Ipswich	Salem.
Linwood; village in town of Northbridge, on Providence and Worcester R. R	Blackstone.
Liswell; hill in Agawam; elevation, 340 feet	Springfield.
Little; bay on southern coast of Fair Haven, east of Sconticut Neck	New Bedford.
Little; creek tributary to North River, in northeastern part of Marshfield	Duxbury.
Little; island in Osterville Harbor, on southwest coast of Barnstable	Barnstable.
Little; mountain in Southampton; elevation, 500 feet	Springfield.
Little; pond (salt) on southern coast of Falmouth	Falmouth.
Little; pond in northern part of Plymouth	Plymouth.
Little; pond in Mendon	Blackstone.
Little; pond in Bradford	Lawrence.
Little; pond in Braintree	Dedham.
Little; pond in Bolton	Marlboro.
Little; river in State of New Hampshire and in Haverhill, 10 miles long, and flows into Merrimac River	Haverhill.
Little; river in Newbury and Newburyport; flows into Parker River	Newburyport.
Little; river in northwest part of Huntington	Chesterfield.
Little; river in southwestern part of Dartmouth; flows into Buzzards Bay	New Bedford.
Little; river in southwestern part of Gloucester; flowing into Squam River	Gloucester.
Little; river in Charlton; 5 miles long	Webster.
Little Allen; pond in eastern part of Brimfield	Brookfield.
Little Bear; hill in Westford; elevation, 320 feet	Lowell.
Little Black Rock; island north of Cohasset	Boston Bay.
Little Brewster; island in Boston Bay	Boston Bay.
Little Calf; island in Boston Bay	Boston Bay.

	Atlas sheets.
Little Cedar; swamp in Middleboro	Middleboro.
Little Chauncey; pond in Northboro	Marlboro.
Little Clear; pond in northern part of Plymouth	Plymouth.
Little Cliff; pond in Brewster	Wellfleet.
Little Creek; pond in southern part of Duxbury	Duxbury.
Little Five Mile; pond in southern part of Plymouth	Plymouth.
Little; harbor on southwestern coast of Falmouth	Falmouth.
Little; harbor; irregular shaped arm of Buzzards Bay, extending into southern border of Wareham	Falmouth.
Little Herring; pond in southern part of Plymouth	Plymouth.
Little Hog; island west of Hull	Boston Bay.
Little Island; pond in Plymouth	Plymouth.
Little Mioxes; pond in Nantucket	Nantucket.
Little Misery; island lying immediately south of Great Misery Island	Salem.
Little Moose; hill in southwest part of Huntington	Chesterfield.
Little Mugget; hill in Charlton; elevation, 1,078 feet	Webster.
Little Nahant; village in Nahant	Boston Bay.
Little Nahant; beach on east coast of Nahant	Boston Bay.
Little Neck; peninsula on southern extremity of Great Neck, in eastern part of Ipswich	Salem.
Little Pudding; brook in central part of Pembroke	Abington.
Little Quittacas; pond in Lakeville and Rochester	Middleboro.
Little River; village in Westfield	Springfield.
Little Rest; village in Brimfield	Brookfield.
Little Sandy; pond in southern part of Plymouth	Plymouth.
Little Sandy; pond in southwest part of Yarmouth	Barnstable.
Little Sandy Bottom; pond in southwest part of Pembroke	Abington.
Little South; pond in northern part of Plymouth	Plymouth.
Little Spectacle; pond in Lancaster	Groton.
Little Thatcher; island in Barnstable Harbor	Barnstable.
Littleton; town in Middlesex County; area, 18 square miles.	Groton. Lowell.
Littleton Station; village in town of Littleton, on Fitchburg R. R	Groton.
Littletown; village in northeastern part of Marshfield	Duxbury.
Little Tully; mountain in Orange; elevation, 800 feet	Winchendon.
Littleville; village in Chester	Chesterfield.
Little Wachusett; hill in Princeton; elevation, 1,560 feet	Worcester.
Little Watatic; mountain in Ashburnham	Fitchburg.
Little Wigwam; pond in Dedham	Dedham.
Livermore; mountain peak in western part of Monterey; altitude, 1,863 feet	Sheffield.
Lizzie; mountain in town of Greenwich; altitude, 900 feet	Belchertown.
Loagy; bay on west coast of Wellfleet; opens into Wellfleet Harbor	Wellfleet.
Loblolly; cove in eastern coast of Rockport	Gloucester.
Lobster; cove; narrow arm of Annisquam Harbor, extending into northern part of Gloucester Harbor	Gloucester.
Lock; pond in Shutesbury	Warwick. Belchertown.
Lock; village in Shutesbury	Warwick.
Locke; brook in New Hampshire and towns of Ashby and Townsend, tributary to Walker Brook; 7 miles long	Fitchburg.
Locust; pond in Tyngsboro	Lowell.

	Atlas sheets.
Locust; hill in Tyngsboro; elevation, 200 feet	Lowell.
Logging; swamp in Rochester	Middleboro.
Long; beach on southeastern coast of Rockport	Gloucester.
Long; beach consisting of long narrow reef forming east side of Plymouth Harbor, town of Plymouth	Plymouth.
Long; cove in Tisbury, Marthas Vineyard, part of Great Tisbury Pond	Marthas Vineyard.
Long; creek in Sandwich, flowing into Cape Cod Bay	Barnstable.
Long; hill in northeastern part of Manchester; elevation, 160 feet	Gloucester.
Long; hill in West Newbury; elevation, 200 feet	Newburyport.
Long; hill in southeastern part of Georgetown; elevation, 200 feet	Salem.
Long; hill in Leominster; elevation, 880 feet	Fitchburg.
Long; hill in north part of Pembroke	Abington.
Long; hill on southern boundary of Ashland; elevation, 460 feet	Franklin.
Long; hill in town of Bolton	Marlboro.
Long; island in Boston Bay, one of the group of islands lying southeast of Boston	Boston Bay.
Long; island about one-half mile long between West Island and Sconticut Point	New Bedford.
Long; pond in Wellfleet	Wellfleet.
Long; pond in Truro	Wellfleet.
Long; pond in Brewster	Wellfleet.
Long; pond on southern boundary of Brewster	Yarmouth.
Long; pond in Yarmouth	Yarmouth.
Long; pond south of Yarmouthport	Barnstable.
Long; pond in west part of Barnstable	Barnstable.
Long; pond in south part of Barnstable	Barnstable.
Long; pond in Lakeville and Freetown	Middleboro.
Long; pond in Rochester	Middleboro.
Long; pond about one-half mile long in southeastern part of Bourne	Falmouth.
Long; pond about 1 mile long in southwestern part of Falmouth	Falmouth.
Long; pond in Plymouth	Plymouth.
Long; pond in Plymouth	Plymouth.
Long; pond in southern part of Plymouth	Plymouth.
Long; pond in Nantucket	Nantucket.
Long; pond in western part of Blandford	Sandisfield.
Long; pond on boundary line between Tyringham and Lee	Becket.
Long; pond in Royalston	Winchendon.
Long; pond in northwestern part of Great Barrington	Sheffield.
Long; pond on boundary between Ayer and Groton	Groton.
Long; pond in western part of Sturbridge	Brookfield.
Long; pond in Rutland	Worcester.
Long; pond in Tewksbury	Lowell. Lawrence.
Long; pond on northwest boundary of Dracut	Lowell.
Long; pond in Littleton	Lowell.
Long; point between Pocksha and Great Quittacas Pond, Lakeville and Middleboro	Middleboro.
Long; point extending into Herring Pond in Edgartown, Marthas Vineyard	Marthas Vineyard.

	Atlas sheets.
sand reef projecting from Cape Cod and inclosing Provincetown Harbor	Provincetown.
point on southern coast of Wareham, projecting erly into mouth of Wareham River and Buzzards	Falmouth.
brook flowing into Connecticut River in northern dley	Northampton.
Headlight; light-house at northern extremity of d, Boston Bay; height, 121 feet; fixed light, and 16 miles	Boston Bay.
; town in Hampden County; area, 28 square miles	Springfield. Palmer.
; brook in town of Longmeadow, 4 miles long; to Connecticut River	Springfield.
; brook in Rutland, 2 miles long; tributary to r	Worcester.
; brook in Burlington, 1 mile long; tributary to k	Boston.
; station on New York, New Haven and Hartford own of Longmeadow	Springfield.
irregular-shaped island in Buzzards Bay at west f Woods Holl	Falmouth.
village in Acushnet	New Bedford.
ight; light-house upon extreme end of Cape Cod.	Provincetown.
rook tributary to Seekonk Brook in northwestern eat Barrington, draining Long Pond	Sheffield.
rothers; three hills near Long Pond in Littleton; 340, 360, and 360 feet, respectively	Lowell.
illage in Brookline, on Boston and Albany R. R., branch	Boston.
ills on boundary between Woburn and Reading; 200 feet	Lawrence.
nt on coast of Plymouth	Plymouth.
Dracut; elevation, 200 feet	Lowell.
n town of Springfield	Palmer.
n Lakeville	Middleboro.
n Lexington; elevation, 360 feet	Boston.
llage in northeastern part of Southampton	Northampton.
n northern part of Plymouth	Plymouth.
rs; village in eastern part of Weymouth	Abington.
l east of north part of Long Island, in Boston Bay.	Boston Bay.
in southwest part of Barnstable	Barnstable.
sland in Snipatuit Pond	Middleboro.
in Middlesex County; area, 13 square miles	Lowell.
d off east coast of Marblehead	Salem.
ion; station on Boston and Maine R. R., in Ando-	Lawrence.
ge in Stow	Framingham.
in Belchertown	Belchertown.
rville; village in Pittsfield, on Boston and Albany	Pittsfield.
poag; pond in Dunstable	Lowell.
village in city of Boston	Boston.
ag; pond in Ashburnham	Fitchburg.

	Atlas sheets.
Lower Plain; village in Hingham	Abington.
Lubber; brook in Wilmington and Billerica	Lawrence.
Ludlow; town in Hampden County; area, 29 square miles	Palmer.
Ludlow; principal village in town of same name	Palmer.
Ludlow Center; village in Ludlow	Palmer.
Lulu; brook in Pittsfield; flows into Lake Onota	Pittsfield.
Lunenburg; town in Worcester County; area, 29 square miles	Groton. Fitchburg.
Lunenburg; village in town of same name	Groton.
Lunenburg; station on Fitchburg R. R., in town of Lunenburg.	Groton.
Luther Station; village in southwestern part of Swansea	Fall River.
Lynde; hill in town of Gardner; elevation, 1,180 feet	Fitchburg.
Lynn; seaboard city in Essex County, on north coast of Massachusetts Bay; area, 12 square miles	Boston Bay.
Lynn; beach between Lynn and Nahant	Boston Bay.
Lynn; harbor south of Lynn and opening into Boston Bay	Boston Bay.
Lynnfield; town in Essex County; area, 10 square miles	Lawrence.
Lynnfield Center; village in town of Lynnfield, on Newburyport branch of Boston and Maine R. R	Lawrence.
Lyon; pond in Ludlow	Palmer.
Lyonsville; village in Coleraine	Greenfield.
Mace Crossing; railway station in Tewksbury, on Boston and Maine R. R., Lowell branch	Lowell.
Machine Shop; station on Salem and Lawrence R. R., in North Andover	Lawrence.
Maddaket; harbor on west coast of Nantucket	Nantucket. Muskeget.
Madequecham; pond in Nantucket	Nantucket.
Mad Mares Neck; a broad area of high ground in Middleboro	Middleboro.
Magnolia; village in southwestern part of Gloucester	Gloucester.
Magnolia; point at southern extremity of Gloucester	Gloucester.
Magnolia; railway station in eastern part of Manchester	Gloucester.
Magog; brook in Acton, 1 mile long	Lowell.
Magog; pond in Acton and Littleton	Lowell.
Magunco; hill in Ashland; elevation, 380 feet	Framingham.
Major; cove on boundary between Cottage City and Edgartown, Marthas Vineyard	Marthas Vineyard.
Malden; city in Middlesex County; area, 5 square miles	Boston.
Malden; brook in West Boylston, 3 miles long; tributary to Nashua River	Worcester.
Malden; river, left-hand branch of Mystic River	Boston.
Mallard; hill in Warwick	Warwick.
Manchaug; village in town of Sutton	Webster. Blackstone.
Manchaug; pond in Sutton and Douglas	Webster.
Manchester; seaboard town in eastern part of Essex County; area, 9 square miles	Salem. Gloucester.
Manchester; village in southern part of town of same name	Salem.
Manchester; harbor, indenting southern coast of Manchester	Salem.
Mandell; hill in town of Hardwick; elevation, 1,020 feet	Barre.
Mangus; hill in Wellesley	Framingham.
Manhan; brook in north part of Southampton	Chesterfield.
Manhan; river flowing northeasterly through East Hampton into Connecticut River at Ox Bow	Northampton.

	Atlas sheets.
Mann; hill in northeast part of Scituate	Abington.
Manning; brook in Florida, 1 mile long, tributary to Cold River	Hawley.
Manomet; hill near coast of Plymouth; elevation, 360 feet	Plymouth.
Manomet; point on coast of Plymouth	Plymouth.
Mansfield; town in Bristol County; area, 22 square miles	Taunton. Dedham.
Mansfield; village in town of same name on Boston and Providence R. R. and Old Colony R. R	Dedham.
Mansfield; pond in central part of Great Barrington	Sheffield.
Manwhague; swamp in Rehoboth	Taunton.
Manwhague Plain; valley in Rehoboth	Taunton.
Maple; hill in West Stockbridge; elevation, 1,780 feet	Pittsfield.
Maple Meadow; brook in Wilmington and Burlington, 3 miles long	Lawrence.
Maplewood; village in Malden on Saugus branch of Boston and Maine R. R	Boston.
Maquam; pond in eastern part of Hanson	Abington.
Marble; hill in Stow; elevation, 481 feet	Marlboro.
Marblehead; seaboard town in southern part of Essex county; area, 6 square miles.	Boston Bay. Salem.
Marblehead; village in eastern part of town of same name on Marblehead Harbor	Salem.
Marblehead; harbor on east coast of Marblehead between Marblehead Neck and the mainland	Boston Bay.
Marblehead Neck; peninsula on eastern coast of Marblehead, which, with the mainland forms Marblehead Harbor.	Boston Bay. Salem.
Marbleridge; railway station on Salem and Lawrence R. R. in North Andover	Lawrence.
Mare; pond in central part of Falmouth	Falmouth.
Marion; town in Plymouth county; area, 13 square miles	Falmouth.
Mark; cove in Buzzards Bay extending westerly into Wareham between Cromeset Neck and Swift Neck	Falmouth.
Mark; mountain between villages of Warren and West Warren in Warren; altitude, 1,100 feet	Brookfield.
Marlboro; town in Middlesex county; area, 22 square miles	Marlboro. Framingham.
Marlboro; principal village in town of same name	Marlboro.
Marlboro; village in southern part of Georgetown	Salem.
Marsh; hill in Dracut; elevation, 260 feet	Lowell.
Marsh; brook in Stockbridge, 1½ miles long, tributary to Housatonic River	Pittsfield.
Marshfield; town in northern part of Plymouth County. It took its name from its extensive marshes. Area, 30 square miles.	Abington. Duxbury.
Marshfield; village in southwestern part of town of same name	Duxbury.
Marshfield Center; railway station in central part of Marshfield	Duxbury.
Marshfield Neck; in eastern part of Marshfield between waters of Green Harbor and South River	Duxbury.
Marston Mills; village in southwest part of Barnstable	Barnstable.
Marthas Vineyard; island off southeast coast of Massachusetts, containing towns of Edgartown, Cottage City, Tisbury, Chilmark, and Gay Head; area 96 square miles.	Marthas Vineyard. Gay Head.

	Atlas sheets.
Martin; brook in North Reading and Wilmington; tributary to Ipswich River	Lawrence.
Martin; pond in Groton	Groton.
Martin; pond in North Reading	Lawrence.
Martin Pond; brook in Groton, 3 miles long	Groton.
Mary; lake in northern part of Naushon Island	Falmouth.
Mary; pond in Rochester	Middleboro.
Mary; pond in Plymouth	Plymouth.
Mashpee; island in northern part of Buzzards Bay, off southeast coast of Wareham	Falmouth.
Mashpee; town in Barnstable County; area, 28 square miles	Barnstable.
Mashpee; pond in town of same name, containing about 395 acres, and connected with Wakeby Pond on the north	Barnstable.
Mashpee; river in town of same name flowing south from Mashpee Pond into Poponesset Bay	Barnstable.
Mashpee Neck; lying between mouth of Mashpee River and head of Poponessett Bay in southeast part of Mashpee	Barnstable.
Mason; brook in town of Mason, N. H., and town of Townsend, Mass. ; flows into Walker Brook	Fitchburg.
Mason; hill in Gill; elevation, 647 feet	Greenfield.
Massachusetts Central; railroad, part of Boston and Maine system, running westward from Boston.	
Massapoag; pond on west boundary of town of Tyngsboro	Lowell.
Massapoag; pond in Sharon	Dedham.
Massapoag; pond in Lunenburg	Groton.
Matapan; village in city of Boston, on New York and New England R. R	Boston.
Matfield; river on southern boundary of East Bridgewater	Abington.
Matfield; river in Bridgewater	Middleboro.
Mattakeset; bay on east coast of Edgartown, Marthas Vineyard.	
Mattapoisett; seaboard town in southern part of Plymouth County; area, 18 square miles	New Bedford.
Mattapoisett; village in southern part of Mattapoisett on Mattapoisett Harbor	New Bedford.
Mattapoisett; harbor on southern coast of Mattapoisett	New Bedford.
Mattapoisett; river in Rochester and Mattapoisett, flows into Mattapoisett Harbor	Middleboro.
Mattapoisett Rock; point at southern extremity of Gardner Neck, Swansea	Fall River.
Mattapoisett Neck; peninsula on southern coast of Mattapoisett, south of Mattapoisett Harbor	New Bedford.
Maxey; pond in Nantucket	Nantucket.
Maynard; town in Middlesex County; area, 6 square miles	Framingham.
Maynard; village in town of same name on Marlboro branch of Fitchburg R. R	Framingham.
Maynard; brook in Oakham, 2 miles long	Barre.
Mayo Beach; light-house in Wellfleet Harbor	Wellfleet.
McCard; brook in Leyden and Greenfield, 3 miles long, tributary to Mill Brook	Greenfield.
McCarthy; hill in Longmeadow; elevation, 340 feet	Springfield.
Mead; pond in Waltham	Boston.
Meadow; brook in central part of East Bridgewater	Abington.
Meadow; brook in Uxbridge and Mendon, tributary to Blackstone River	Blackstone.

	Atlas sheets.
Meadow; brookd in North Brookfiel and New Braintree	Barre.
Meadow; brook in Westford, 2 miles long, flows into Key Pond	Lowell.
Meadow; brook in Hudson, 2 miles long, tributary to Assabet River	Marlboro.
Meadow; brook in Norton and Taunton, 2 miles long, tributary to Birch Brook	Taunton.
Meadow; island in Sippican Harbor, about one-fourth mile southwest of Sippican Neck	Falmouth.
Mechanicsville; village on Taunton River, Fall River	Fall River.
Mechanicsville; village in town of Bellingham	Franklin.
Medfield; town in Norfolk County; area, 15 square miles	Franklin.
Medfield; village in town of same name on Old Colony R. R., Framingham and Mansfield branch	Franklin.
Medfield Junction; railroad junction of Old Colony R. R., Framingham and Mansfield branch, and New York and New England R. R., Woonsocket division, in town of Medfield	Franklin.
Medford; town in Middlesex County; area, 9 square miles	Boston.
Medford; village in town of same name on Medford branch of Boston and Maine R. R., west division	Boston.
Medway; town in Norfolk County; area, 12 square miles	Franklin.
Medway; village in town of same name on New York and New England R. R., Woonsocket division	Franklin.
Meeting House; hill in Ashburnham; elevation, 1,320 feet	Fitchburg.
Meeting House; hill in Methuen; elevation, 220 feet	Lawrence.
Meeting House; pond in town of Westminster	Fitchburg.
Meeting House; swamp in Middleboro	Middleboro.
Melrose; town in Middlesex County; area, 6 square miles	Lawrence. Boston.
Melrose; principal village in town of same name on Boston and Maine R. R., west division	Boston.
Melville; lake in Pittsfield	Pittsfield.
Menauhant; village on southern coast of Falmouth	Falmouth.
Mendal; hill in eastern part of Acushnet; elevation, 146 feet	New Bedford.
Mendon; town of Worcester County; area, 17 square miles	Blackstone.
Mendon; village in town of same name	Blackstone.
Menemsha; pond in Gay Head and Chilmark, Marthas Vineyard	Gay Head.
Menemsha Bight; bay on north coast of Gay Head, Marthas Vineyard	Gay Head.
Merino; pond in Dudley	Webster.
Merino; village in Dudley on New York and New England R. R., Southbridge branch	Webster.
Merriam; hill in Lexington; elevation, 280 feet	Boston.
Merriam; hill in Framingham; elevation, 360 feet	Framingham.
Merrimac; town in Essex County; area, 9 square miles	Haverhill. Newburyport.
Merrimac; village in town of same name	Haverhill.
Merrimac; river heading in New Hampshire, flows southerly into Massachusetts, and then northeasterly to its mouth. The eastern part of north boundary of State is a line 3 miles north of course of this river.	Lowell. Lawrence. Haverhill. Newburyport.
Merrimacport; village in Merrimac	Newburyport.
Merritt; hill in northwest part of Williamsburg	Chesterfield.

	Atlas sheets.
Metcalf; village in Holliston	Franklin.
Methodist; camp ground in Eastham	Wellfleet.
Methuen; town in Essex County; area, 24 square miles	Lawrence.
Methuen; principal village in town of same name on Manchester and Lawrence R. R	Lawrence.
Miacomet; pond in Nantucket	Nantucket.
Micajah; pond in northern part of Plymouth	Plymouth.
Mid; village in Deerfield	Greenfield.
Middle; pond in Belchertown	Belchertown.
Middle Brewster; island in group of islands in Boston Bay	Boston Bay.
Middle Point; creek in Tisbury, Marthas Vineyard, tributary to Great Tisbury Pond	Marthas Vineyard.
Middle Small; pond in Kingston	Plymouth.
Middleboro; town in Plymouth County; area, 73 square miles.	Middleboro.
Middleboro; principal village in town of same name on Old Colony R. R	Middleboro.
Middlefield; town in western part of Hampshire County; area, 23 square miles.	Chesterfield. Becket.
Middlefield; village in central part of town of same name	Becket.
Middlesex; village in town of Lowell on Boston, Lowell and Nashua R. R	Lowell.
Middlesex Fells; tract of wild broken country in towns of Stoneham, Medford, Melrose, Malden, and Manchester	Boston.
Middleton; town in southwestern part of Essex County; area, 16 square miles.	Lawrence. Salem.
Middleton; principal village in town of same name on Salem and Lawrence R. R	Lawrence.
Mile; brook in northern part of Kingston, flowing into Blackstone Pond	Duxbury.
Mile; brook tributary to Ipswich River in Topsfield	Salem.
Mile; river tributary to Ipswich River, draining Wenham Lake.	Salem.
Milford; town in Worcester County; area, 16 square miles	Blackstone. Franklin.
Milford; village in town of same name	Blackstone.
Milham; brook in Marlboro, 2 miles long, tributary to Assabet River	Marlboro.
Milk; island about 1 mile southeast of Rockport	Gloucester.
Mill; village in Ashby	Fitchburg.
Mill; river tributary to Connecticut River in Franklin and Hampshire counties	Northampton.
Mill; brook in Springfield, 1 mile long, tributary to Connecticut River	Springfield.
Mill; river in eastern part of Gloucester, flowing northerly into Annisquam Harbor	Gloucester.
Mill; river in western part of Weymouth	Abington.
Mill; river, left branch of Blackstone River	Blackstone.
Mill; river, tributary to Housatonic River flowing southerly through New Marlboro	Sheffield.
Mill; river in Taunton, tributary to Taunton River	Taunton.
Mill; pond 1 mile long through which Hubbard Brook flows, in central part of Sheffield	Sheffield.
Mill; pond about one-half mile long in northwestern part of Bourne	Falmouth.

	Atlas sheets.
Mill; pond in northern part of Plymouth	Plymouth.
Mill; pond on Acushnet River, Acushnet	New Bedford.
Mill; pond in Littleton	Lowell. Groton.
Mill; pond, arm of Stage Harbor, Chatham	Chatham.
Mill; pond northwest of Yarmouthport	Barnstable.
Mill; hill in Orleans	Wellfleet.
Mill; cove on east side of Weymouth Fore River in northwest part of Weymouth	Abington.
Mill; creek in north part of Sandwich flowing into Cape Cod Bay	Barnstable.
Mill; creek in Newbury	Newburyport.
Mill; creek tributary to Parker River flowing northeasterly through Rowley	Salem.
Mill; brook in New Braintree and West Brookfield	Barre.
Mill; brook tributary to Quinebaug River in Brimfield	Brookfield.
Mill; brook in southeast part of Goshen	Chesterfield.
Mill; brook in north part of Cummington	Chesterfield.
Mill; brook in Concord and Lincoln, 3 miles long, tributary to Concord River	Framingham.
Mill; brook tributary to Deerfield River in Monroe	Greylock.
Mill; brook in Leyden, Bernardston, and Greenfield, 7 miles long, flowing into Green River	Greenfield.
Mill; brook in Monroe, flowing into Dunbar Brook	Hawley.
Mill; brook in Heath and Charlemont, 7 miles long, flowing into Deerfield River	Hawley.
Mill; brook in Webster, 1 mile long, between Lake Chaubunagungamaug and French River	Webster.
Mill; brook in Rutland	Worcester.
Mill River; village in western part of New Marlboro on Mill River	Sheffield.
Mill Valley; village in southwestern part of Amherst	Northampton.
Millbury; town in Worcester County; area, 17 square miles	Webster. Blackstone.
Millbury; village in town of same name, on Providence and Worcester R. R	Webster.
Miller; brook in Agawam, 1 mile long, tributary to Westfield River	Springfield.
Miller; hill in southern part of Williamsburg; elevation, 640 feet	Northampton.
Miller; river, left-hand branch of Connecticut River in northern part of State.	Winchendon. Warwick.
Miller Falls; village in Montague on Fitchburg R. R	Warwick.
Miller Neck; brook in Middleboro	Middleboro.
Millington; village in New Salem	Belchertown.
Millis; village in town of same name on New York and New England R. R., Woonsocket division	Franklin.
Millis; town in Norfolk County; area, 13 square miles	Franklin.
Millstone; hill in Westford; elevation, 360 feet	Lowell.
Millville; village in town of Blackstone	Blackstone.
Milton; town in Norfolk County; area, 18 square miles	Boston. Dedham.
Milton; village in town of same name	Boston.
Milton Mills; village in Milton	Boston.
Milton Upper Mills; village in Milton	Boston.

	Atlas sheets.
Milward; village in Charlton	Webster.
Mine; brook in Franklin and Bellingham, tributary to Charles River	Franklin.
Mine; brook in Dover, Medfield, Walpole, and Foxboro, 8 miles long; flows into Neponsett Reservoir	Franklin.
Mine; brook in town of Pepperell and in New Hampshire, 2 miles long; tributary to Nissitissit River	Groton.
Mine; brook in Webster, 1 mile long, tributary to Sucker Brook.	Webster.
Mine; hill in Templeton; elevation, 1,220 feet	Winchendon.
Minechoag; mountain in Ludlow; elevation, 700 feet	Palmer.
Minechoag; pond in Ludlow	Palmer.
Mineral; hill in Shutesbury	Belchertown.
Minots Ledge Light; light-house built of granite on low reef of rocks; fixed light; height, 92 feet above sea level, and visible 16 miles	Boston Bay.
Miscoe; brook in Grafton	Blackstone.
Miscoe; hill in town of Mendon; elevation, 580 feet	Blackstone.
Mishaum; point at southern extremity of Smith Neck, Dartmouth	New Bedford.
Mishawum; railway station on Boston and Lowell R. R. in Woburn	Lawrence.
Mittineaque; village in West Springfield on Boston and Albany R. R	Springfield.
Moccasin; brook in Phillipston and Petersham	Barre. Winchendon.
Moffatt; hill in Newton; elevation, 200 feet	Boston.
Mohawk; brook in southwestern part of Sunderland flowing into Connecticut River	Northampton.
Mohawk; lake in Stockbridge	Pittsfield.
Monday; hill in Salisbury; elevation, 180 feet	Newburyport.
Monk; hill in Kingston; elevation, 220 feet	Plymouth.
Monumet; river in Bourne	Plymouth.
Monomonac; lake in New Hampshire and in town of Winchendon.	Winchendon. Fitchburg.
Monomonac; pond in Winchendon	Winchendon.
Monomony; island in Nantucket Sound	Yarmouth.
Monomoy; long, sandy island at southeast angle of Cape Cod in town of Orleans	Chatham.
Monomoy; life-saving station on Monomoy Island 3 miles north of Monomoy Point light	Chatham.
Monomoy Point; light-house, fourth order, fixed white light in 30-foot tower; lantern 41 feet above sea level; visible 12 miles	Chatham.
Monoosnoc; brook in Leominster and Fitchburg	Fitchburg.
Monoosnoc; hill on boundary between Leominster and Fitchburg; elevation, 1,000 feet	Fitchburg.
Monponset; pond in north part of Halifax	Middleboro. Abington.
Monroe; town in Franklin County; area, 10 square miles	Greylock. Hawley.
Monroe; village in town of same name	Hawley.
Monroe Bridge; village and bridge in town of Monroe	Hawley.
Monserat; station on Gloucester branch of Boston and Maine R. R. in southern part of Beverly	Salem.

	Atlas sheets.
onson; town in Hampden County; area, 44 square miles	Palmer.
Monson; village in town of same name	Palmer.
Montague; town in Franklin County; area, 41 square miles	Greenfield. Warwick.
Montague; village in town of same name	Greenfield.
Montague City; village in town of Montague on New Haven and Northampton R. R	Greenfield.
Monterey; town in southern part of Berkshire County; area, 28 square miles.	Sheffield. Sandisfield.
Monterey; village in town of same name	Sandisfield.
Montgomery; town in Hampden County; area, 14 square miles	Granville.
Montgomery; village in town of same name	Granville.
Montrose; station in Wakefield on Boston and Maine R. R	Lawrence.
Montville; village in central part of Sandisfield	Sandisfield.
Monument; island in Oldham Pond in west part of Pembroke	Abington.
Monument; mountain in northern part of Great Barrington	Pittsfield. Sheffield.
Monument Beach; village on northwestern coast of Bourne	Falmouth.
Monumet; village in northwestern part of Bourne, on Monumet River	Falmouth.
Monumet; river in northwestern part of Bourne, flowing into Buzzards Bay at Cohasset Narrows	Falmouth.
Moody Corner; village in eastern part of South Hadley	Northampton.
Moon; island in Boston Bay, southeast of Boston	Boston Bay.
Moon; mountain in town of Monson; elevation, 1,120 feet	Palmer.
Moon Pond Meadow; salt marsh in Truro	Provincetown.
Moonshine; hill in Buckland; elevation, 1,540 feet	Hawley.
Moore; brook tributary to Quaboag River, in North Brookfield.	Barre. Brookfield.
Moore; lake in town of Warwick	Warwick.
Moose; brook in Barre and Hardwick, 8 miles long	Barre.
Moose; brook in Southampton, 2 miles long, tributary to Manhan River	Springfield.
Moose; hill in Sharon; elevation, 560 feet	Dedham.
Moose; pond in Spencer	Worcester.
Moose Horn; brook in New Salem	Belchertown.
Moose Horn; pond in Hubbardston	Worcester.
Moose Meadow; brook in Montgomery and Westfield, 4 miles long, tributary to Westfield River	Granville.
More; brook in southeast part of Goshen	Chesterfield.
Morley; hill in northwestern part of Sandisfield; elevation, 1,860 feet	Sandisfield.
Moromoesoy; island in Waquoit Bay; also called Moromascoy Island	Falmouth.
Morse; brook in Marlboro, 1 mile long, flows into Broad Meadow Brook	Marlboro.
Morse; hill in southeastern part of Essex County	Salem.
Morse; pond in Wellesley	Framingham.
Morseville; village in Natick	Framingham.
Morseville; village in Charlton	Webster.
Morton; pond in Enfield	Belchertown.
Moses; hill in central part of Manchester; elevation, 180 feet	Salem.
Mosher; point on eastern coast of Dartmouth, at west entrance to Clark Cove	New Bedford.

	Atlas sheets.
Mosquito; brook in North Andover, nearly 4 miles long	Lawrence.
Moss; brook in Orange and Warwick	Warwick.
Mother; brook in Dedham	Dedham.
Mother; brook tributary to Copecut River, in northern part of Fall River	Fall River.
Mother; brook in Fall River and Freestone	Taunton.
Moulton; pond in Rutland	Worcester.
Mount Auburn; cemetery in Cambridge	Boston.
Mount Hope; village in city of Boston, on Boston and Providence R. R.	Boston.
Mount Hope; bay in southwestern part of Bristol County, arm of Narragansett Bay	Fall River.
Mount Tom; village in northeastern part of East Hampton	Northampton.
Mount Washington; town in southwestern corner of Berkshire County; area, 23 square miles	Sheffield.
Mount Washington; village in Everett and Chelsea	Boston.
Mound Meadow; hill in Dunstable; elevation, 341 feet	Groton.
Mountain; brook in Warwick, 2 miles long, unites with Kdider Brook	Warwick.
Mountain; brook tributary to Quinebaug River in Brimfield	Brookfield.
Mountain, The; hill in Framingham; elevation, 380 feet	Framingham
Mowry; brook in Marlboro and Southboro, 3 miles long, flows into Broad Meadow Brook	Marlboro.
Mud; creek forming part of boundary line of Chatham and Harwich, draining into Pleasant Bay	Chatham.
Mud; creek in Newbury	Newburyport.
Mud; pond in Natick	Framingham.
Mud; pond in Ashburnham	Fitchburg.
Mud; pond in Pittsfield	Pittsfield.
Muddy; brook in towns of Ware and Hardwick	Barre.
Muddy; brook in Granby, Chicopee, and South Hadley	Springfield.
Muddy; brook in Mendon	Blackstone.
Muddy; cove in Great Tisbury Pond, Tisbury, Marthas Vineyard	Marthas Vineyard.
Muddy; creek on boundary between Chatham and Harwich	Yarmouth.
Muddy; pond in town of Hyde Park	Boston.
Muddy; pond in northeastern part of Washington	Becket.
Muddy; pond in Kingston	Plymouth.
Muddy; pond in Wareham	Plymouth.
Muddy; pond in southern part of Wenham Swamp, Wenham.	Salem.
Muddy; pond near village of Newton, in west part of Barnstable	Barnstable.
Muddy; pond in Westminster	Fitchburg.
Muddy; pond in Rutland and Oakham	Barre.
Muddy; pond in Hardwick	Barre.
Muddy; pond in north part of Halifax	Abington.
Muddy Cove; brook in Dighton, 2 miles long, tributary to Taunton River	Taunton.
Muddy Run; marshy branch of Rowley River, in northern part of Ipswich	Salem.
Mugget; hill in Charlton; elevation, 1,012 feet	Webster.
Mulberry Mead; brook in Norton and Easton, 6 miles long, tributary to Winneconnet Pond	Taunton.
Mulpus; brook in Townsend, Shirley, and Lunenburg, 8 miles long, tributary to Nashua River	Groton.

	Atlas sheets.
Mumford; river, right branch of Blackstone River, flowing through towns of Sutton, Northbridge, Douglas, and Uxbridge	Blackstone.
Munn; brook in Granville, Southwick, and Westfield, 6 miles long, tributary to Westfield Little River	Granville.
Muscle; point in western part of Gloucester Harbor	Gloucester.
Muskeget; island northwest from western point of Nantucket.	Muskeget.
Musquapog; pond in Rutland	Worcester.
Musquashiat; pond in northeastern part of Scituate	Abington.
Mussel; point on southeast corner of Sandy Beach and extending into Barnstable Harbor	Barnstable.
Myrick; village in town of Berkley, on Taunton and New Bedford R. R	Taunton.
Myrick; pond in Brewster	Wellfleet.
Mystic; lakes which join Mystic and Arbajona rivers in Winchester on boundary between towns of Medford and Arlington	Boston.
Mystic; pond in Methuen	Lawrence.
Mystic; river draining northern part of Middlesex County, having upon its crooked course many lakes; enters Boston Harbor between Chelsea and Charlestown	Boston.
Mystic Park; driving park in Medford	Boston.
Nabnasset; pond in Westford	Lowell.
Nahant; town in Essex County; area, 1 square mile	Boston Bay.
Nahant; bay north of Nahant and east of Lynn	Boston Bay.
Namasket; village in Middleboro	Middleboro.
Namasket; river in Middleboro, 7 miles long, tributary to Taunton River	Middleboro.
Namequoit; point on south coast of Orleans	Wellfleet.
Namskaket; creek on boundary line between Orleans and Brewster, 1 mile long, flows into Cape Cod Bay	Wellfleet.
Namskaket; village in Orleans	Wellfleet.
Nantasket; village on northwest coast of Cohasset	Boston Bay.
Nantasket; beach on east coast of Hull	Boston Bay.
Nantucket; town in Nantucket County; area, 52 square miles.	Muskeget. Nantucket.
Nantucket; harbor on northern coast of Nantucket	Nantucket.
Nantucket; island off southeast coast, constituting town of Nantucket; area, 52 square miles.	Muskeget. Nantucket.
Nantucket; sound on south side of Cape Cod	Nantucket. Yarmouth. Barnstable.
Nantucket; principal village in town of same name	Nantucket.
Nantucket; lighthouse on northeast coast of Nantucket	Nantucket.
Nantucket; cliffs on north coast of Nantucket	Nantucket.
Nantucket Cliff; beacons on north shore of Nantucket	Nantucket.
Narrow; creek on coast of Nantucket	Muskeget.
Narrows; section of Connecticut River	Greenfield.
Narrows; light-house near Fort Warren, 46 feet above sea level, with fixed red light and visible 12 miles	Boston Bay.
Nashaquitsa; settlement in Chilmark, Marthas Vineyard	Gay Head.
Nashaquitsa; cliffs on south coast of Chilmark, Marthas Vineyard	Gay Head.
Nashaquitsa; pond in Chilmark, Marthas Vineyard	Gay Head.
Nashawena; one of the Elizabeth islands, Gosnold	Gay Head.

	Atlas sheets.
Nashoba; brook in Acton and Westford, 3 miles long	Lowell
Nashoba; hill on southern boundary of Westford; elevation, 380 feet	Lowell.
Nashua; river heading in northern part of the State, and flowing with circuitous course into the Merrimac River in southern New Hampshire.	Fitchburg. Groton. Worcester. Marlboro.
Nashua; reservoir in Gardner and Ashburnham	Fitchburg.
Nashua; village on Marblehead Neck	Boston Bay.
Nashua, Acton, and Boston; branch of the Concord and Montreal Railroad system	
Nasketucket; village in eastern part of Fair Haven on Nasketucket River	New Bedford.
Nasketucket; bay on coast of Fair Haven and Mattapoisett	New Bedford.
Nasketucket; river in eastern part of Fair Haven, flowing into Little Bay	New Bedford.
Nason; hill in Sherborn; elevation, 260 feet	Franklin.
Natick; town in Middlesex County; area, 16 square miles	Framingham.
Natick; village in town of same name	Framingham.
Natty; pond in Hubbardston	Barre.
Natty Pond; brook in Hubbardston	Barre.
Naugus Head; point on northwestern coast of Marblehead	Salem.
Nauset; beach, low sand-bar extending along southeast end of Cape Cod	Chatham.
Nauset; harbor on east boundary of Orleans	Wellfleet.
Nauset Beach; beacons on eastern coast of Wellfleet	Wellfleet.
Nauset Beach; life saving-station on eastern coast of Eastham.	Wellfleet.
Naushon; one of the Elizabeth islands, part of town of Gosnold.	Falmouth. Gay Head.
Neal; pond on boundary between Merrimac and Haverhill	Haverhill.
Nebo, Mount; hill in town of Medfield; elevation, 240 feet	Franklin.
Neck; hill in Hopedale	Blackstone.
Neck; pond near coast in south of Barnstable	Barnstable.
Ned Point Light; light on coast of Mattapoisett, east of Mattapoisett Harbor; lantern 43 feet above sea level and visible 11 miles	New Bedford.
Needham; town in Norfolk County; area 12 square miles.	Framingham. Boston.
Needham; village in town of same name on Woonsocket division, New York and New England R. R	Boston.
Needham Corner; village in southeastern part of Peabody	Salem.
Neeseponset; pond in Dana	Belchertown.
Negus; mountain in Rowe; altitude, 1,830 feet	Hawley.
Nelson; island in Long Pond, Lakeville	Middleboro.
Nelson Island; creek in eastern part of Rowley, flowing into Plum Island River	Salem.
Neponset; village in city of Boston	Boston.
Neponset; reservoir in Foxboro	Franklin. Dedham.
Neponset; river in Norfolk and Suffolk counties, about 18 miles long; flows into Dorchester Bay.	Dedham. Boston.
New; harbor on south side of Barnstable, opening into Nantucket Sound	Barnstable.
New Ashford; mountainous town in northwestern part of Berkshire County, area, 14 square miles.	Berlin. Greylock.

	Atlas sheets.
New Ashford; village in central part of town of same name	Greylock.
New Bedford; seaboard city in Bristol County; area, 19 square miles	New Bedford.
New Bedford; harbor in southern part of Bristol County between New Bedford and Fair Haven	New Bedford.
New Bedford; reservoir in Freetown and Acushnet	Middleboro.
New Boston; village in eastern part of Sandisfield on Farmington River	Sandisfield.
New Boston; village in town of Winchendon	Winchendon.
New Boston; village in town of Framingham	Framingham.
New Boston; river in Dennis, flows into Chase Garden Creek.	Yarmouth.
New Braintree; town in Worcester County; area, 21 square miles	Barre.
New Braintree; principal village in town of same name	Barre.
New England; village in town of Grafton	Blackstone.
New Haven and Northampton; part of New York, New Haven and Hartford Railroad system running from New Haven, Conn., to Northampton and Holyoke.	
New Lenox; village in northeastern part of town of same name	Becket.
New London Northern; part of Central Vermont Railroad system running from New London northward across the State into Vermont.	
New Marlboro; town in southern part of Berkshire County; area, 50 square miles.	Sheffield. Sandisfield.
New Marlboro; village in central part of town of same name.	Sandisfield.
New Salem; town in Franklin County; area, 28 square miles.	Belchertown. Warwick.
New Salem; village in town of Salem	Belchertown. Warwick.
Newtown; hill in Littleton; elevation, 400 feet	Lowell.
New York and New England; railroad extending from Boston southwestward through Connecticut to New York.	
New York, New Haven and Hartford; railroad system connecting New York City with New Haven and Hartford, Conn., and Springfield, Holyoke, Northampton and other places in Massachusetts.	
Newbury; town in Essex County; area, 27 square miles	Newburyport.
Newbury Old Town; village in town of Newbury	Newburyport.
Newburyport; city in Essex County; area, 18 square miles	Newburyport.
Newburyport; village in town of same name	Newburyport.
Newburyport; light-house on Plum Island	Newburyport.
Newcomb; pond in Truro	Wellfleet.
Newfield; pond in Chelmsford	Lowell.
Newton; city in Middlesex County; area 18 square miles	Boston.
Newton; village in town of same name	Boston.
Newton; village in west part of Barnstable	Barnstable.
Newton Center; village in Newton on Boston and Albany R. R.	Boston.
Newton Highlands; village in Newton, on Boston and Albany R. R	Boston.
Newton Lower Falls; village in town of Newton	Framingham.
Newton Upper Falls; village in town of Newton, on Woonsocket division, New York and New England R. R	Boston.
Newtonville; village in town of Newton, on Boston and Albany R. R	Boston.

	Atlas sheets.
Nichewaug; village in town of Petersham	Barre.
Nichol; brook tributary to Ipswich River, rising in Danvers and forming boundary line between Topsfield and Middleton	Salem.
Nichol; brook in Amesbury, 1 mile long, flows into Merrimac River	Newburyport.
Nichol; hill in Lunenburg; elevation, 542 feet	Groton.
Nickerson Neck; peninsula on north of Crow Pond and Bassing Harbor, Chatham	Chatham.
Niles; pond in southern part of Gloucester	Gloucester.
Nine Acre Corner; village in Concord	Framingham.
Nine Mile; pond in Wilbraham	Palmer.
Nineteenth; hill in Winchendon; elevation, 1,180 feet	Winchendon.
Nipmuck; pond in Mendon	Blackstone.
Nipmuck; pond in Webster	Webster.
Nippenicket; pond in Bridgewater	Taunton.
Nissitissit; hills in Pepperell; elevation, 380 to 470 feet	Groton.
Nissitissit; river in town of Pepperell and in New Hampshire, tributary to Nashua River	Groton.
No Bottom; pond in Brewster	Wellfleet.
No Bottom; pond in west part of Pembroke	Abington.
No Mans Land; island lying south of Gay Head, Marthas Vineyard	Gay Head.
Nobadee; pond in Nantucket	Nantucket.
Nobscot; hill in Framingham; elevation, 600 feet	Framingham.
Nobscusset; harbor on north coast of Dennis	Yarmouth.
Nobscusset; point on north coast of Dennis	Yarmouth.
Nobska; point on eastern coast of Cromeset Neck, south of Mark Cove	Falmouth.
Nobska Point; light on southwestern corner of Falmouth at eastern entrance of Woods Holl	Falmouth.
Nod; brook in Groton, 1 mile long, tributary to Nashua River	Groton.
Nonacoicus; brook in Ayer, 1 mile long, tributary to Nashua River	Groton.
Nonamesset; island southwest of Woods Holl, in Vineyard Sound	Falmouth.
Nonantum; village in Newton	Boston.
None Such; pond in Webster	Framingham.
Nonotuck; mount, summit of Holyoke range, in Northampton; altitude, 852 feet	Northampton.
Nonquitt; village in southeastern part of Dartmouth	New Bedford.
Nonset; brook in Westford, 2 miles long	Lowell.
Nookagee; river in Fitchburg, Westminster, and Ashburnham	Fitchburg.
Norcross; hill in Templeton; elevation, 1,100 feet	Winchendon.
Norfolk; town in Norfolk County; area, 16 square miles	Franklin.
Norfolk; village in town of same name, on New York and New England R. R	Franklin.
Norman Woe; point on southern coast of Gloucester, at west entrance of Gloucester Harbor	Gloucester.
Norman Woe; rock in western entrance to Gloucester Harbor	Gloucester.
North; brook in Northboro and Berlin, 4½ miles long, tributary to Assabet River	Marlboro.
North; brook in Westhampton	Chesterfield.
North; cove in northern coast of West Island	New Bedford.
North; point at northern extremity of West Island	New Bedford.

	Atlas sheets.
North; pond on coast of Tuckernuck Island	Muskeget.
North; pond in Orange	Warwick.
North; pond in Worcester	Worcester.
North; pond in Hopkinton and Milford	Blackstone.
North; river in Coleraine and Shelburne, 3 miles long, flows into Deerfield River	Greenfield.
North; river flowing into Beverly Harbor in northern part of Salem	Salem.
North; river in northern part of Plymouth County, flowing into Massachusetts Bay.	Abington. Duxbury.
North; village in Webster, on New York and New England R. R.	Webster.
North; village in Pepperell	Groton.
North; village in Lancaster	Marlboro.
North Abington; village in northeast part of Abington	Abington.
North Acton; railway station in Acton, on Nashua, Acton and Boston R. R	Lowell.
North Adams; town in northern part of Berkshire County; area, 19 square miles	Greylock.
North Adams; village in northern part of North Adams, on Hoosic River	Greylock.
North Amherst; village in northern part of Amherst	Northampton.
North Andover; town in Essex County; area, 28 square miles.	Lawrence.
North Andover; principal village in town of same name	Lawrence.
North Andover Center; village in North Andover, near Marbleridge Station, on Salem and Lawrence R. R	Lawrence.
North Ashburnham; village in town of Ashburnham	Fitchburg.
North Ashburnham; station in town of Ashburnham, on Cheshire R. R	Fitchburg.
North Attleboro; town in Bristol County; area, 20 square miles.	Providence.
North Becket; village in northern part of Becket	Becket.
North Bellingham; village in town of Bellingham, on New York and New England R. R., Woonsocket division	Franklin.
North Bernardston; village in town of Bernardston	Greenfield.
North Beverly; village in western part of Beverly	Salem.
North Beverly Station; village in northern part of Beverly	Salem.
North Billerica; village in town of Billerica, on Boston and Lowell R. R	Lowell.
North Blandford; village in town of Blandford	Granville.
North Brookfield; town in Worcester County; area, 22 square miles.	Barre. Brookfield.
North Brookfield; village in town of same name	Barre.
North Cambridge; village in city of Cambridge	Boston.
North Carver; village in town of Carver	Middleboro.
North Charlton; village in town of Charlton	Webster.
North Chatham; village in Chatham	Chatham.
North Chelmsford; village in town of Chelmsford, on Stony Brook R. R	Lowell.
North Chester; village in north part of Chester	Chesterfield.
North Dana; village in town of Dana, on Boston and Albany R. R., Athol branch	Belchertown.
North Dartmouth; village in central part of Dartmouth	New Bedford.
North Dighton; village in town of Dighton	Taunton.
North Duxbury; village in northern part of Duxbury	Duxbury.
North Eastham; *village in town of Eastham*	Wellfleet.

	Atlas sheets.
North Easton; village in town of Easton, on Old Colony R. R.	Dedham.
North Egremont; village in northern part of Egremont, on Green River	Sheffield.
North Falmouth; village in northeastern part of Falmouth	Falmouth.
North Farms; village in northern part of Northampton	Northampton.
Northampton; city in central part of Hampshire County; area, 37 square miles	Northampton.
Northboro; town in Worcester County; area, 19 square miles	Marlboro.
Northboro; village in town of same name	Marlboro.
Northbridge; town in Worcester County; area, 19 square miles	Blackstone.
Northbridge; village in town of same name	Blackstone.
Northfield; town in Franklin County; area, 37 square miles	Greenfield. Warwick.
Northfield; principal village in town of same name, on New London Northern R. R	Warwick.
Northfield Farms; village in town of Northfield, on New London Northern R. R	Warwick.
North Framingham; station on Old Colony R. R., in Framingham	Framingham.
North Hadley; village in western part of Hadley, on Connecticut River	Northampton.
North Hanover; village in north part of Hanover	Abington.
North Hanson; village in northwest part of Hanson	Abington.
North Hanson; station (railway) in western part of Hanson	Abington.
North Harwich; village in town of Harwich	Yarmouth.
North Hatfield; village in northern part of Hatfield	Northampton.
North Leominster; village in town of same name, on Fitchburg R. R	Groton.
North Leverett; village in town of Leverett	Warwick.
North Lexington; village in Lexington	Boston.
North Littleton; station on Boston and Lowell R. R., in town of Littleton	Groton.
North Marshfield; village in northwest part of Marshfield	Abington.
North Meadow; pond in Blandford	Granville.
North Middleboro; village in town of Middleboro	Middleboro.
North Milford; village in town of Milford	Blackstone.
North Monson; village in town of Monson, on New London Northern R. R	Palmer.
North; mountain in Northfield; altitude, 1,340 feet	Warwick.
North Nashua; river in Lancaster and Leominster, tributary to Nashua River	Marlboro.
North New Salem; village in town of New Salem	Warwick.
North Orange; village in town of Orange	Warwick.
North Otis; village in northern part of Otis	Sandisfield.
North Oxford; village in town of Oxford, on Webster Branch Boston and Albany R. R	Webster.
North Pembroke; village in north part of Pembroke	Abington.
North Plympton; village in town of Plympton	Middleboro.
North Pocasset; village situated upon small arm of Buzzards Bay, in western portion of Bourne	Falmouth.
North Prescott; village in town of Prescott	Belchertown.
North Quincy; village in Quincy, on Old Colony R. R	Boston.
North Raynham; village in town of Raynham	Taunton.

	Atlas sheets.
North Reading; town in Middlesex County; area, 13 square miles	Lawrence.
North Reading; village in town of same name, on Salem and Lowell R. R.	Lawrence.
North Rehoboth; village in Rehoboth	Taunton.
North Ridge; hill in northern part of Great Neck, Ipswich; elevation, 120 feet	Salem.
North Rochester; village in town of Rochester	Middleboro.
North Rutland; village in town of Rutland	Worcester.
North Salem; village in northern part of Salem, on North River	Salem.
North Saugus; village in town of Saugus	Boston.
North Scituate; village in northwest part of Scituate	Abington.
North Shirley; village in town of Shirley	Groton.
North Spencer; village in Spencer	Worcester.
North Sudbury; village in town of Sudbury	Framingham.
North Sugarloaf; point about 760 feet high, in southeastern part of Deerfield	Northampton.
North Tewksbury; village in Tewksbury	Lawrence.
North Tisbury; village in town of Tisbury, Marthas Vineyard.	Marthas Vineyard.
North Truro; village in Truro	Provincetown.
North Uxbridge; village in Uxbridge	Blackstone.
Northville; village in northeast part of East Bridgewater	Abington.
Northwest Duxbury; village in western part of Duxbury	Duxbury.
North Weymouth; village in north part of Weymouth	Abington.
North Wilbraham; village in town of Wilbraham, on Boston and Albany R. R	Palmer.
North Wilmington; railway station on Salem and Lowell R. R., in Wilmington	Lawrence.
North Woburn; village in Woburn, on Woburn branch of Boston and Lowell R. R.	Lawrence.
North Yarmouth; village in central part of Manchester	Salem.
Norton; town in Bristol County; area, 30 square miles	Taunton.
Norton; village in town of same name	Taunton.
Norton; hill in southeastern part of Conway; elevation, 920 feet	Northampton.
Norton; reservoir in Mansfield and Norton	Taunton.
Norwell; town in Plymouth County; appears on map as South Scituate; area, 22 square miles	Abington.
Norwich; hill in south central part of Huntington	Chesterfield.
Norwich; pond in northeast part of Huntington	Chesterfield.
Norwich; village in Huntington	Chesterfield.
Norwich Bridge; village in Huntington	Granville.
Norwood; town in Norfolk County; area, 10 square miles	Dedham.
Norwood; village in town of same name, on New York and New England R. R	Dedham.
Norwottock, Mount; mountain in Holyoke range, on line between Amherst and Granby; also called Hilliard Knob; altitude, 1,115 feet	Northampton.
Notch, The; gap in Holyoke range, in Granby	Northampton.
Noyes; hill in northeastern part of Tolland; elevation, 1,700 feet	Sandisfield.
Noyes; pond in central part of Tolland	Sandisfield.
Nunket; pond on western boundary line of Bridgewater.	Taunton.

	Atlas sheets.
Nut; island off northeast coast of Quincy	Boston Bay.
Nutting; hill in town of Ashburnham; elevation, 1,600 feet	Fitchburg.
Nutting; pond in Billerica	Lowell.
Nye Neck; peninsula on northwestern corner of Falmouth between Cataumet Harbor and Wild Harbor	Falmouth.
Oak; hill in Westford; elevation, 340 feet	Lowell.
Oak; hill in Harvard; elevation, 630 feet	Groton.
Oak; hill in Littleton; elevation, 420 feet	Groton.
Oak; hill in Pepperell; elevation, 380 feet	Groton.
Oak; hill in Newton	Boston.
Oak; hill in Fitchburg; elevation, 900 feet	Fitchburg.
Oak; hill in Southboro; elevation, 440 feet	Marlboro.
Oak Bluffs; village in Cottage City, Marthas Vineyard	Marthas Vineyard.
Oak Hill; pond in Lancaster	Groton.
Oak Island; railway station, northeast part of Revere	Boston Bay.
Oakdale; village in Dedham, on New York and New England R. R	Dedham.
Oakdale; village in West Boylston, on Fitchburg and Worcester R. R	Worcester.
Oakham; town in Worcester County; area, 21 square miles	Barre.
Oakham; principal village in town of same name	Barre.
Oakland; village in town of Taunton	Taunton.
Ocean View; village in northern part of Rockport	Gloucester.
Ockcooanganset; hill in Marlboro; elevation, 500 feet	Marlboro.
Ockway; bay; part of Poponesset Bay, on southeast coast of Mashpee	Barnstable.
Old Boat; point on west side of Weymouth Fore River, Quincy	Abington.
Old Cambridge; part of city of Cambridge in which is located Harvard University	Boston.
Old Colony; part of Boston and Providence Railroad system, extending southward and southeastward from Boston to Taunton, Fall River, New Bedford, Cape Cod, and other points	
Old Colony House; railway station in north part of Hingham	Abington.
Old Common; village in Millbury	Webster.
Old Furnace; village in town of Hardwick, on Ware River Branch, Boston and Albany R. R	Barre.
Old Harbor; creek in north part of Sandwich, flowing into Cape Cod Bay	Barnstable.
Old; harbor on northeast coast of Cohasset	Boston Bay.
Old Pond Meadow; hill in south part of South Scituate	Abington.
Old Spain; village in north part of Weymouth	Abington.
Old Swamp; river in southeast part of Weymouth	Abington.
Old Tower; light on Cedar Point at north entrance of Scituate Harbor, northeast coast of Scituate	Duxbury.
Oldham; pond in western part of Pembroke	Abington.
Onota; brook in Pittsfield, 3 miles long; tributary to Housatonic River	Pittsfield.
Onset; village in Wareham, on coast of Buzzards Bay	Falmouth.
Onset; bay; arm of Buzzards Bay projecting into southeastern part of Wareham	Falmouth.
Onset; island situated in mouth of Onset Bay, about one-fourth mile southwest of Jacob Neck	Falmouth.

	Atlas sheets.
Outer Brewster; island in Boston Bay	Boston Bay.
Open Pasture; pond in Provincetown	Provincetown.
Orange; town in Franklin County; area, 36 square miles	Warwick. Winchendon.
Orange; village in town of same name, on Fitchburg R. R.	Warwick.
Orchard; hill on southern boundary of Stow; elevation, 300 feet	Marlboro.
Orcutt; brook in Orange, 2 miles long; tributary to Miller River	Warwick.
Ore; hill in Granville; elevation 1,300 feet	Granville.
Orient; mountain in Pelham	Belchertown.
Orleans; town in Barnstable County; area, 15 square miles	Wellfleet. Chatham.
Orleans; village in town of same name, on Old Colony R. R., Cape Cod division	Wellfleet.
Orleans Beach; life-saving station on eastern coast of Orleans.	Wellfleet.
Orleans Mills; village in Rehoboth	Providence.
Orme; island near northeast coast of Marblehead	Salem.
Osceola; mountain in Richmond; altitude 1,420 feet	Pittsfield.
Osceola; island in Robbin Pond, in southeast part of East Bridgewater	Abington.
Osgood; brook on western boundary of Wendell, 2 miles long; tributary to Miller River	Warwick.
Oshar; rocks near east shore of the Glades, on northeast coast of Scituate	Abington.
Osterville; village in Barnstable	Barnstable.
Osterville Grand; island in Osterville Harbor, on southwest coast of Barnstable	Barnstable.
Osterville Landing; village at west entrance to New Harbor, on south coast of Barnstable	Barnstable.
Otis; town in southeastern part of Berkshire County; area, 36 square miles	Sandisfield.
Otis; village in southern part of Otis	Sandisfield.
Otis: hill in north part of Hingham	Boston Bay.
Otis; hill north of central part of South Scituate	Abington.
Otis; reservoir in eastern part of Otis	Sandisfield.
Otter Pond; brook in Gill	Greenfield.
Otter River; village in Templeton	Winchendon.
Otter Run; brook in Gill, flows into Connecticut River	Warwick.
Overlook; reservoir in Fitchburg	Fitchburg.
Owen; mountain in Conway; altitude 1,460 feet	Greenfield.
Owl; hill in Waltham; elevation, 240 feet	Boston.
Ox Bow; bend of Connecticut River in northeastern part of Easthampton	Northampton.
Ox Pasture; hill in northern part of Rowley; elevation, 180 feet.	Salem.
Oxford; village in western part of Fair Haven	New Bedford.
Oxford; town in Worcester County; area, 27 square miles	Webster.
Oxford; village in town of same name, on Norwich and Worcester R. R.	Webster.
Oyster; creek connecting northwest corner of Stage Harbor with Oyster Pond, Chatham	Chatham.
Oyster; pond about one-half mile long in southwestern part of Falmouth	Falmouth.
Oyster; pond in Edgartown, Marthas Vineyard	Marthas Vineyard.

	Atlas sheets.
Oyster; pond at head of narrow body of water extending back from northwest corner of Stage Harbor	Chatham.
Packard; mountain in New Salem	Belchertown.
Packard; pond in Orange	Winchenden.
Packardsville; village in Pelham	Belchertown.
Page; brook in Carlisle, 2 miles long, tributary to Concord River	Lowell.
Paine; creek tributary to Green Creek, in northeastern part of Ipswich	Salem.
Pakachoag; hill in Worcester; elevation, 700 feet	Webster.
Palmer; town in Hampden County; area, 25 square miles	Palmer. Brookfield.
Palmer; village in town of same name, on Boston and Albany R. R	Palmer.
Palmer; cove in Salem Harbor indenting eastern coast of Salem.	Salem.
Palmer; island in New Bedford Harbor	New Bedford.
Palmer; river in Rehoboth	Providence. Taunton.
Palmer Center; village in town of Palmer	Palmer.
Pamanset; river flowing southerly through Dartmouth into Buzzards Bay.	New Bedford. Fall River.
Pamet River; life saving-station on Atlantic coast of Truro	Provincetown.
Pampet; river in Truro	Wellfleet.
Pampet River; life saving-station on east coast of Truro	Wellfleet.
Panker; pond near coast in south part of Barnstable	Barnstable.
Pantry; brook in Sudbury, 2 miles long	Framingham.
Parish; pond in Otis	Sandisfield.
Park; hill in Millbury; elevation, 620 feet	Webster.
Park; pond in Tyngsboro	Lowell.
Parker; hill in Hawley; elevation, 2,060 feet	Hawley.
Parker; point on southwestern coast of Falmouth projecting southward into Woods Holl	Falmouth.
Parker; river in northern part of Essex County, flowing easterly into Plum Island River	Lawrence. Newburyport. Salem.
Parker; river in Yarmouth, flowing into Nantucket Sound	Yarmouth.
Parksville; village in Brimfield	Palmer.
Parsonage; hill in Haverhill; elevation, 233 feet	Haverhill.
Partridgeville; village in Templeton	Winchendon.
Pasque; one of the Elizabeth Islands in Gosnold	Gay Head.
Pasture; brook, tributary to Mill Creek, running northwesterly through Rowley	Salem.
Patch Meadow; brook in Billerica and Chelmsford; tributary to River Meadow Brook	Lowell.
Pattaquattic; hill in Palmer; elevation, 1,080 feet	Palmer.
Pattaquattic; pond in Palmer	Palmer.
Pattenville; village in Billerica	Lawrence.
Paul; hill in Sherborn; elevation, 320 feet	Franklin.
Paul; point on north coast of Tisbury, Marthas Vineyard	Marthas Vineyard.
Pawtucketville; village in Lowell	Lowell.
Paxton; town in Worcester County; area, 19 square miles	Worcester.
Paxton Center; village in town of Paxton	Worcester.
Pea; brook in Conway, 2 miles long; tributary to Bear River.	Greenfield.

	Atlas sheets.
Pea; island in Nasketucket Bay	New Bedford.
Peabody; town in southern part of Essex County; area, 17 square miles.	Lawrence. Salem.
Peabody; village in eastern part of town of same name, on North River	Salem.
Peach; point on northeast coast of Marblehead	Salem.
Peaked; cliff on coast of Plymouth	Plymouth.
Peaked; hill in Chilmark, Marthas Vineyard; elevation, 311 feet	Gay Head.
Peaked; rock near coast in Westport	Sakonnet.
Peaked; mountain in town of Monson; altitude, 1,240 feet	Palmer.
Peaked Hill Bar; life-saving station in Provincetown	Provincetown.
Pearce; island in Gloucester	Gloucester.
Pearl; hill in Fitchburg; elevation, 1,000 feet	Fitchburg.
Pearl Hill; brook in Townsend and Lunenburg, 8 miles long	Fitchburg.
Pease; point on eastern coast of Mattapoisett	New Bedford.
Pebble; brook in Blandford, 7 miles long	Granville.
Pecowsic; brook in Longmeadow, 5 miles long; tributary to Connecticut River	Springfield.
Pecuanticiot; river in Sharon, Foxboro, and Mansfield; flows into Canoe River	Dedham.
Peddock; island west of Hull, in Boston Bay	Boston Bay.
Pegan; hill in Natick; elevation, 320 feet	Framingham.
Pegan; hill in Dover; elevation, 360 feet	Franklin.
Pelham; town in Hampshire County; area, 27 square miles	Belchertown.
Pelham; village in town of same name	Belchertown.
Pelham; brook in Rowe and Charlemont, 7 miles long; flows into Deerfield River	Hawley.
Pembroke; town in Plymouth County; area, 24 square miles	Abington.
Pendleton; hill in Sudbury; elevation, 260 feet	Framingham.
Penikese; one of the Elizabeth Islands, in town of Gosnold	Gay Head.
Penn; brook, tributary to Parker River, in Georgetown	Salem.
Penny; brook in Ware	Palmer.
Penny; brook in Saugus, 1 mile long	Boston.
Pentucket; pond in northwestern part of Georgetown	Salem.
Peppercorn; hill in town of Upton	Blackstone.
Pepperell; town in Middlesex County; area, 27 square miles	Groton.
Pepperell; village in town of same name	Groton.
Pequoig; railway station in Winchendon	Winchendon.
Perkins; hill in western part of Essex; elevation, 180 feet	Salem.
Perry; pond in North Brookfield	Brookfield.
Perry; mountain peak in Richmond; altitude, 2,060 feet	Pittsfield.
Perryville; village in Rehoboth	Providence.
Peru; town in eastern part of Berkshire County; area, 27 square miles.	Chesterfield. Becket.
Peru; village in central part of town of same name	Becket.
Peru; hill in western part of Peru; elevation, 2,180 feet	Becket.
Peter; hill in Sherborn; elevation, 240 feet	Framingham.
Peter; pond in Dracut	Lowell.
Peter; pond in Dudley	Webster.
Peter; pond in Sandwich, covering about 176 acres	Barnstable.
Peter; river in Wrentham and Bellingham, and in State of Rhode Island	Franklin.

	Atlas sheets.
Petersham; town in Worcester County; area, 40 square miles	Winchendon. Barre. Belchertown. Warwick.
Petersham; village in town of same name	Barre
Petticoat; hill in west part of Williamsburg	Chesterfield.
Pew; brook in Gardner	Fitchburg.
Phelps; brook in Hancock and Pittsfield, 4 miles long; flows into Housatonic branch of Housatonic River	Pittsfield.
Phillip; beach on east coast of Swampscott	Boston Bay.
Phillip; brook tributary to South River, in Duxbury	Duxbury.
Phillip; brook in Ashburnham	Fitchburg.
Phillip; brook tributary to Hoosic River, in eastern part of North Adams	Greylock.
Phillip; pond on east coast of Swampscott	Boston Bay.
Phillip Beach; railway station in east part of Swampscott	Boston Bay.
Phillipston; town in Worcester County; area, 40 square miles	Winchendon. Barre.
Phillipston; pond in town of same name	Winchendon.
Phillipston Center; village in town of Phillipston	Winchendon.
Phillis; island in Barnstable Harbor	Barnstable.
Philo; brook in Agawam	Springfield.
Phinney; harbor in Buzzards Bay between north end of Bennett Neck and the mainland	Falmouth.
Picard; point on southern coast of Manchester	Salem.
Pickerel; pond in Ludlow	Palmer.
Pickerel; pond in Natick	Framingham.
Pickle; pond in Wareham	Plymouth.
Pierce; brook in West Brookfield	Barre.
Pier Head; northern extremity of reef known as Long Beach, which forms eastern boundary of Plymouth Harbor	Plymouth.
Pierpoint Meadow; pond in Charlton and Dudley	Webster.
Pigeon; hill in northern part of Rockport; elevation, 180 feet	Gloucester.
Pigeon Cove; village in northern part of Rockport	Gloucester.
Pilling; pond in Lynnfield	Lawrence.
Pine; brook in north part of Kingston	Abington.
Pine; creek in southern part of Plum Island, flowing into Plum Island River	Salem.
Pine; mountain in Hampden; altitude, 1,040 feet	Palmer.
Pine; point extending into Weymouth Fore River, in northwest part of Weymouth	Abington.
Pine; hill in eastern part of Bourne; elevation, 260 feet	Falmouth.
Pine; hill in Southboro; elevation, 500 feet	Marlboro.
Pine; hill in Fitchburg; elevation, 720 feet	Fitchburg.
Pine; hill in Lynnfield; elevation, 200 feet	Lawrence.
Pine; hill in Andover; elevation, 300 feet	Lawrence.
Pine; hill in Tyngsboro; elevation, 280 feet	Lowell.
Pine; hill in Chelmsford; elevation, 320 feet	Lowell.
Pine; hill in Lynn	Boston Bay.
Pine; hill in Conway; elevation, 1,060 feet	Greenfield.
Pine; hill on western boundary of Kingston	Middleboro.
Pine; hill in Princeton; elevation, 1,400 feet	Worcester.
Pine; hill in Bolton	Marlboro.
Pine; hill in Sherborn; elevation, 360 feet	Franklin.

	Atlas sheets.
l; brook in Barre and Hardwick, 3 miles long	Barre.
k; cove in southeastern part of Mattapoiset	New Bedford.
nt; river in Duxbury Marsh, Duxbury	Duxbury.
amp; brook in Taunton and Raynham	Taunton.
e; village in Athol	Winchendon.
; hill in southern part of Topsfield; elevation, 200 feet.	Salem.
brook in northeast part of Chester	Chesterfield.
e; hill in West Newbury; elevation, 180 feet	Newburyport.
hill in Gill; elevation, 700 feet	Greenfield.
mountain in Northboro	Marlboro.
mountain in northwest part of Westhampton	Chesterfield.
nountain in northern part of Wales; altitude, 1,220 feet.	Brookfield.
island in Great Quittacas pond, Lakeville	Middleboro.
hill in New Salem; elevation, 760 feet	Belchertown.
on western boundary of Orange; elevation, 1,240 feet.	Warwick.
l; town in western part of Berkshire County; area, uare miles.	Pittsfield. Becket.
l; village in central part of town of same name	Pittsfield. Becket.
eadow in southwest part of Northfield	Warwick.
d; town in Hampshire County; area, 39 square miles	Chesterfield. Hawley.
d; pond in town of same name	Hawley.
e; village in eastern part of Hadley	Northampton.
e; village in Wrentham	Franklin.
; mountain in southeastern part of Mount Washington; ude, 1,980 feet	Sheffield.
; pond in southeastern part of Mount Washington	Sheffield.
hill south of World's End, on north coast of Hingham.	Boston Bay.
; island about one-half mile long, situated in Sippican or	Falmouth.
pond in Yarmouth	Yarmouth.
; bay about 1¼ miles in extent, on Cape Cod between ns and Chatham	Chatham.
; brook in Barre, 3 miles long	Barre.
; mountain in northern part of Peabody; altitude, 200	Salem.
; mountain in town of Barre; altitude, 1,080 feet.	Barre.
; mountain in Winchendon; altitude, 1,280 feet	Winchendon.
; mountain in Woburn; altitude, 300 feet	Boston.
; pond about one-half mile long in southern part of am Swamp, Wenham	Salem.
dale; pond in Sutton	Blackstone.
hill in southern part of Great Neck, Ipswich; elevation, eet	Salem.
op; pond in Ayer	Groton.
nd in Haverhill	Haverhill.
land in northeastern part of Essex County, belonging wns of Ipswich, Rowley, Newbury, and Newburyport, eparated from the mainland by Plum Island River.	Newburyport. Salem.
and; river in northeastern part of Essex County, con- ng mouths of Ipswich and Merrimac rivers and sep- ng Plum Island from the mainland.	Newburyport. Salem.
; reservoir in southeastern part of Hinsdale	Becket.

	Atlas sheets.
Plymouth; town in Plymouth County; area, 116 square miles.	Plymouth. Duxbury.
Plymouth; principal village in town of same name	Plymouth.
Plymouth; harbor in village of Plymouth, inclosed between the mainland and a long reef	Plymouth.
Plympton; town in Plymouth County; area, 16 square miles	Middleboro.
Plympton; village in town of same name	Middleboro.
Pocasset; harbor, arm of Buzzards Bay on western coast of Bourne	Falmouth.
Pochassic; mountain in Westfield; altitude, 300 feet	Granville.
Pochet; island off east coast of Orleans	Wellfleet.
Pochet Neck; peninsula in Orleans	Wellfleet.
Pocksha; pond in Lakeville and Middleboro	Middleboro.
Pocomo Head; point extending into Nantucket Harbor, Nantucket	Nantucket.
Pocumtuck: mountain in Charlemont; altitude, 1,887 feet	Hawley.
Pocumtuck; rock in Deerfield; elevation, 822 feet	Greenfield.
Podonk; pond in Brookfield and Sturbridge	Brookfield.
Poge; cape on northern extremity of Great Neck, Chappaquiddick Island, in Edgartown, Marthas Vineyard	Marthas Vineyard.
Point of Pines; at south entrance to Saugus River	Boston Bay.
Point Shirley; village on southeast coast of Winthrop	Boston Bay.
Pole; hill in Andover; elevation, 140 feet	Lawrence.
Pollock Rip; lightship anchored off Pollock Rip Shoals, 2½ miles east of south end of Monomoy Island	Chatham.
Polpis; harbor on coast of Nantucket opening into Nantucket Harbor	Nantucket.
Pomeroy; mountain in town of Greenwich; altitude, 900 feet.	Belchertown.
Pomeroy; mountain in northern part of Southampton; altitude, 1,233 feet.	Chesterfield. Northampton.
Pomp; pond in Andover	Lawrence.
Pond; brook in Montague, 2 miles long, tributary to Saw Mill River	Greenfield.
Pond; brook in Huntington	Chesterfield.
Pond; brook in Granville, 4 miles long	Granville.
Pond; brook in Blandford, 2 miles long, tributary to Pebble Brook	Granville.
Pond; brook in Leverett and Amherst	Belchertown.
Pond; brook in Gardner	Fitchburg.
Pond; brook in Westfield, 3 miles long	Springfield.
Pond; hill in town of Mendon; elevation, 460 feet	Blackstone.
Pond; hill in Amesbury; elevation, 200 feet	Newburyport.
Pond; mountain in Northfield; elevation, 1,190 feet	Greenfield.
Pondville; village in Auburn	Webster.
Pondville; village in Barnstable	Barnstable.
Ponkapoag; pond on western boundary of Randolph	Dedham.
Pontoosic; lake on boundary line between Pittsfield and Lanesboro.	Pittsfield. Becket.
Pool; mountain peak in southeastern part of Great Barrington; altitude, 1,680 feet	Sheffield.
Poole; hill in central part of Rockport; elevation, 180 feet	Gloucester.
Poor Meadow; brook in western part of Hanson	Abingdon.
Poponesset; bay on southeast coast of Mashpee	Barnstable.
Poponesset; beach between Poponesset Bay and Nantucket Sound, southeast coast of Mashpee	Barnstable

	Atlas sheets.
oponesset; island in Poponesset Bay on southeast coast of Mashpee	Barnstable.
opple; hill in southern part of Conway; elevation, 940 feet	Northampton.
opple Hill; brook tributary to Roaring Brook in southwestern part of Conway	Northampton.
opulatic; pond on northwestern boundary of Norfolk	Franklin.
oquoy Trout; brook in Middleboro and Lakeville, 3¼ miles long, tributary to Taunton River	Middletown.
orter; island in Merrimac River	Haverhill.
orter; river in eastern part of Danvers, flowing into Beverly Harbor	Salem.
orter; swamp in western part of Granby	Northampton.
otash; brook in Barre	Barre.
otash; brook tributary to Wright River in eastern part of Williamsburg	Northampton.
otash; brook in Blandford and Russell, 5 miles long, tributary to Westfield River	Granville.
otash; brook in Dracut, one-half mile long, tributary to Richardson Brook	Lowell.
otomska; point on southern coast of Dartmouth	New Bedford.
ottapaug; hill in Dana; elevation, 880 feet	Barre.
ottapaug; pond in Dana	Barre.
otter; hill in Sutton; elevation, 794 feet	Webster.
otter; mountain in Taconic Range in Lanesboro; altitude 2,400 feet	Berlin.
ottersville; village in Somerset	Taunton.
ottersville; village in eastern part of Somerset, on Taunton River	Fall River.
oucha; pond in Chappaquiddick Island in Edgartown, Marthas Vineyard	Martha's Vineyard.
onnakin; hill in Charlton; elevation, 800 feet	Webster.
ound; hill in Rutland; elevation, 1,160 feet	Worcester.
overty; hill in Hardwick; elevation, 1,080 feet	Barre.
overty; point projecting into Plymouth Harbor	Plymouth.
owder; hill in southern part of Beverly; elevation, 100 feet	Salem.
owder; point in head of Duxbury Bay, extending from eastern part of Duxbury	Duxbury.
owder Hole; on western coast of Monomoy Island	Yarmouth.
owder House; hill in Methuen; elevation, 200 feet	Lawrence.
owder Mill; brook in Montgomery and Westfield, 7 miles long	Granville.
owder Mill; brook in Westfield, 3 miles long	Springfield.
ower Mills; village in Phillipston	Winchendon.
ower Neck; in Yarmouth	Yarmouth.
owow; hill in Salisbury; elevation, 330 feet	Newburyport.
owow; river on boundary between Salisbury and Amesbury and in Amesbury, tributary to Merrimac River	Newburyport.
ranker; pond in Saugus	Boston.
ratt; brook in Barre	Barre.
ratt; hill in town of Upton; elevation, 608 feet	Blackstone.
ratt Junction; village and railroad junction in Sterling on Old Colony R. R	Marlboro.
ratt; pond in town of Upton	Blackstone.
rattville; village in Raynham on main line Old Colony R. R.	Taunton.
rescott; town in Hampshire County; area, 17 square miles	Belchertown.

	Atlas sheets.
Prescott; village in town of same name	Belchertown.
Prescott; hill in town of Prescott; elevation, 1,100 feet	Belchertown.
Pride Crossing; village in southeastern part of Beverly	Salem.
Priest; brook in Royalston	Winchendon.
Prince Head; point on southeast coast of Peddock Island in Boston Bay	Boston Bay.
Prince; river in Barre, 7 miles long	Barre.
Princeton; town in Worcester County; area, 36 square miles.	Worcester.
Princeton Center; village in Princeton	Worcester.
Proctor; brook tributary to North River in northern part of Peabody	Salem.
Prospect; hill in town of Barre; elevation, 1,000 feet	Barre.
Prospect; hill in Waltham; elevation, 400 feet	Framingham.
Prospect; hill in Westminster; elevation, 1,220 feet	Fitchburg.
Prospect; hill in town of Gardner; elevation, 1,200 feet	Fitchburg.
Prospect; hill in eastern part of South Hadley; elevation, 300 feet	Northampton.
Prospect; hill in Chilmark, Marthas Vineyard; elevation, 308 feet	Gay Head.
Prospect; hill in Auburn; elevation, 860 feet	Webster.
Prospect; hill in Charlton; elevation, 925 feet	Webster.
Prospect; hill in Taunton; elevation, 200 feet	Taunton.
Prospect; hill in West Springfield; elevation, 380 feet	Springfield.
Prospect; hill in northwestern part of Mount Washington; elevation, 1,900 feet	Sheffield.
Prospect; hill in southeast part of Hingham	Abington.
Prospect; hill in Phillipston; elevation, 1,380 feet	Winchendon.
Prospect; hill in southeastern part of Rowley; elevation, 264 feet	Salem.
Prospect; hill in Plympton; elevation, 100 feet	Middleboro.
Prospect; hill in Groton; elevation, 503 feet	Groton.
Prospect; hill in Harvard; elevation, 557 feet	Groton.
Prospect; hill in Westford; elevation, 440 feet	Lowell.
Prospect; hill in Tewksbury; elevation, 340 feet	Lawrence.
Prospect; lake containing 140 acres in northwestern part of Egremont	Sheffield.
Prospect Hill; pond on eastern boundary of Taunton	Taunton.
Prospectville; village in Waltham	Framingham.
Provens; mountain in Agawam; altitude, 640 feet	Springfield.
Providence; hill in Westford; elevation, 360 feet	Lowell.
Providence and Worcester; railroad connecting Worcester with Providence, R. I.	
Provincetown; town in Barnstable County; area, 11 square miles	Provincetown.
Provincetown; principal settlement within town of same name.	Provincetown.
Pudding; brook in eastern part of Pembroke	Abington.
Puffer; pond in Maynard	Framingham.
Pulpit; hill in northern part of Amherst; elevation, 340 feet	Northampton.
Pulpit Rock; hill in Rowe	Hawley.
Pumpkin; brook in Townsend and Shirley, 1 mile long, tributary to Squannacook River	Groton.
Punch; brook in Greenfield and Shelburne, 2 miles long, tributary to Green River	Greenfield.
Punch; brook in Fitchburg	Fitchburg.

	Atlas sheets.
Punkatasset; hill in Concord; elevation, 300 feet	Framingham.
Purgatory; brook in Sutton; flows into Whitin Pond	Blackstone.
Purgatory; brook in Norwood and Dedham, 3 miles long, tributary to Neponset River	Dedham.
Purgatory Chasm; gorge in town of Sutton	Blackstone.
Purge; brook in Pelham, 2 miles long, flows into Swift River	Belchertown.
Putnam; brook in Chelmsford, 1 mile long, tributary to river Meadowbrook	Lowell.
Putnam; hill in Buckland; elevation, 1,220 feet	Hawley.
Putnam; hill in northern part of Danvers; elevation, 200 feet	Salem.
Putnam; hill in Sutton; elevation, 783 feet	Webster.
Putnamsville; village in northeastern part of Danvers	Salem.
Pye; brook in Boxford and Topsfield	Salem.
Quabin; hill in Enfield; elevation, 1,020 feet	Belchertown.
Quaboag; river tributary to Chicopee River, in southern part of the State.	Worcester. Brookfield. Palmer.
Quaboag; pond in Brookfield	Brookfield.
Quacker Run; creek which flows into Poponesset Bay, in southeast part of Mashpee	Barnstable.
Quaker; brook in Berkley, 1½ miles long	Taunton.
Quamquisset; harbor in southwestern coast of Falmouth	Falmouth.
Quaquechan; river, arm of Watuppa Pond, extending into city of Fall River	Fall River.
Quarantine Rocks; islands south of Rainsford Island, in Boston Bay	Boston Bay.
Queen; brook in west part of Pembroke	Abington.
Queen Anns Corners; village in western part of South Scituate	Abington.
Quicks Hole; harbor between islands of Pasque and Nashawena, in town of Gosnold	Gay Head.
Quicksand; point on southwest coast of Westport	Sakonnet.
Quinapoxet; pond in Princeton and Holden	Worcester.
Quincy; city in Norfolk County; area, 18 square miles	Boston. Boston Bay. Dedham. Abington..
Quincy; village in town of same name	Abington. Dedham.
Quincy; bay east of town of Quincy; opens into Boston Harbor.	Boston.
Quincy Center; village in town of Quincy, on Old Colony R. R	Boston.
Quincy Neck; peninsula in eastern part of Quincy	Abington.
Quinepoxet; river in Holden and West Boylston, 6 miles long; tributary to Nashua River	Worcester.
Quinepoxet; village in Holden	Worcester.
Quinsigamond; village in Worcester, on Providence and Worcester R. R	Webster.
Quinsigamond; lake on southwestern boundary of Shrewsbury.	Worcester. Marlboro.
Quinsigamond; river, outlet of Quinsigamond Lake, in Grafton; flows into Blackstone River	Blackstone.
Quivett; creek on boundary between Brewster and Dennis; flows into Cape Cod Bay.	Yarmouth. Wellfleet.

	Atlas sheets.
Quivett Neck; peninsula on north coast of Dennis	Wellfleet.
Quohog; point extending into Katama Bay, in Edgartown, Marthas Vineyard	Marthas Vineyard.
Quostinet; river rising in Mashpee and flowing into Waquoit Bay	Falmouth.
Raccoon; hill in town of Barre; elevation, 1,040 feet	Barre.
Raccoon; island off east coast of Quincy	Boston Bay.
Race; mountain in southeastern part of Mount Washington; altitude, 2,395 feet	Sheffield.
Race; point, most western extremity of Cape Cod, in Provincetown	Provincetown.
Race Point; life-saving station upon Race Point, Provincetown	Provincetown.
Race Point; light-house upon Race Point, Provincetown	Provincetown.
Race Run; head of inlet or lagoon back of Race Point, in Provincetown	Provincetown.
Rag Rock; hill in Woburn	Boston.
Ragged; hill in West Brookfield; elevation, 1,227 feet	Barre.
Ragged; island in Hingham Harbor	Boston Bay.
Railtree; hill in Carlisle; elevation, 400 feet	Lowell.
Railcut; hill in eastern part of Gloucester; elevation, 160 feet.	Gloucester.
Rainsford; island east of south part of Long Island, in Boston Bay	Boston Bay.
Ram; island in Sippican Harbor, off south coast of Marion	Falmouth.
Ram; island east of south coast of Marblehead	Boston Bay.
Ram; island in Merrimac River	Newburyport.
Ram; island in Buzzards Bay, south of Mattapoiset Neck	New Bedford.
Ram; islands south of entrance to Manchester Harbor	Salem.
Ram Head Bar; reef of rocks in Boston Bay	Boston Bay.
Ramshorn; brook in Millbury, 2 miles long	Webster.
Ramshorn; pond in Millbury and Sutton	Webster.
Randolph; town in Norfolk County; area, 10 square miles	Dedham.
Randolph; village in town of same name, on Old Colony R. R.	Dedham.
Range; light-house on Plum Island	Newburyport.
Rattlesnake; hill on boundary between Lunenburg and Townsend	Fitchburg.
Rattlesnake; hill in Stockbridge; elevation, 1,540 feet	Pittsfield.
Rattlesnake; hill in Dana; elevation, 840 feet	Belchertown.
Rattlesnake; hill in Sharon; elevation, 420 feet	Dedham.
Rattlesnake; hill in New Salem; elevation, 860 feet	Warwick.
Raven; brook in Middleboro and Halifax; 3 miles long	Middleboro.
Ray; hill in town of Gardner; elevation, 1,200 feet	Fitchburg.
Rayberry; hill in Leominster; elevation, 1,020 feet	Fitchburg.
Raynham; town in Bristol County; area, 21 square miles	Taunton.
Raynham; village in town of same name	Taunton.
Reading; town in Middlesex County; area 10 square miles	Lawrence.
Reading; principal village in town of same name, on main line of Boston and Maine R. R	Lawrence.
Reading Highlands; high ground at and around village of Reading, in town of Reading; from 100 to 200 feet high	Lawrence.
Reading Highlands; railway station on main line Boston and Maine R. R., in Reading	Lawrence.
Readville; village in Hyde Park	Dedham.

	Atlas sheets.
Red; brook in Southampton, 2 miles long; tributary to Manhan River	Springfield.
Red; brook in Falmouth and Mashpee, flowing into Waquoit Bay	Falmouth.
Red; river on boundary between Chatham and Harwich	Yarmouth.
Red Bridge; station in Ludlow, on Springfield, Athol and Northeastern Branch of Boston and Albany R. R.	Palmer.
Red Brook; harbor of Buzzards Bay, indenting southwest coast of Bourne	Falmouth.
Red Brush; hill in Wrentham; elevation, 440 feet	Franklin.
Red Oak; hill in south part of Westhampton	Chesterfield.
Red Oak; hill in Merrimac; elevation, 308 feet	Haverhill.
Reed; pond in Nantucket	Nantucket.
Reed; island in Great Quittacas Pond, Lakeville and Middleboro	Middleboro.
Reedy Meadow; brook in Pepperell and Groton, 2 miles long; tributary to Nashua River	Groton.
Reeves; hill in Wayland; elevation, 400 feet	Framingham.
Rehoboth; town in Bristol County; area, 47 square miles	Taunton. Providence.
Rehoboth; village in town of same name	Providence.
Remington; mountain in western part of Cummington	Chesterfield.
Reservoir Marsh; pond on northern boundary of Wrentham	Franklin.
Revere; town in Suffolk County; area, 7 square miles	Boston. Boston Bay.
Revere; beach along coast of Revere	Boston Bay.
Revere; brook in southern part of Lynn	Boston Bay.
Revere Beach; railway station on Revere Beach	Boston Bay.
Rice; hill in Rutland; elevation, 1,260 feet	Worcester.
Rice Crossing; railway crossing on Boston and Albany R. R., in Wellesley	Framingham.
Richardson; brook in Dracut, 2 miles long	Lowell.
Richardson; pond in Woburn	Lawrence.
Richmond; town in Berkshire County; area, 17 square miles	Pittsfield.
Richmond; village in town of same name, on Boston and Albany R. R.	Pittsfield.
Richmond; hill in Dighton; elevation, 180 feet	Taunton.
Richmond; pond on boundary between Pittsfield and Richmond	Pittsfield.
Richmond Furnace; village in town of Richmond, on Boston and Albany R. R.	Pittsfield.
Ricketson; point in eastern part of Dartmouth, extending southward between Clark Cove and Apponagansett Harbor	New Bedford.
Rider; cove, connecting on southwest with Bassing Harbor	Chatham.
Ridge; hill in Plympton	Middleboro.
Ridge; hill in Barre; elevation, 1,140 feet	Barre.
Ring; hill on north boundary of Amesbury; elevation, 280 feet	Newburyport.
Ringville; village in Worthington	Chesterfield.
Ripley; creek in Edgartown, Marthas Vineyard	Marthas Vineyard.
River Meadow; brook in Chelmsford and Lowell, 6 miles long; tributary to Concord River	Lowell.
Riverdale; village in West Springfield	Springfield.
Riverdale; village on Mill River, in Gloucester	Gloucester.

	Atlas sheets.
Riverdale; village in town of Northbridge, on Providence and Worcester R. R.	Blackstone.
Riverside; village in Haverhill	Haverhill.
Riverside Station; village in Newton, on Boston and Albany R. R	Framingham.
Roaring; brook in Freetown	Middleboro.
Roaring; brook, outlet of Clapp Pond in Washington, flowing into Housatonic River	Becket.
Roaring; brook in Chester, tributary to Westfield River	Chesterfield.
Roaring; brook in Huntington and Montgomery, tributary to Westfield River.	Chesterfield. Granville.
Roaring; brook in Shutesbury and Leverett	Belchertown.
Roaring; brook, branch of Mill River, in southern part of Conway	Northampton.
Roaring; brook, branch of Hoosic River, in northern part of Williamstown	Greylock.
Robb; hill in Lunenburg; elevation, 446 feet	Groton.
Robbin; hill in Chelmsford; elevation, 440 feet	Lowell.
Robbin; pond in southeast part of East Bridgewater	Abington.
Robbin; pond in Harwich	Yarmouth.
Robbin; pond in Harvard	Groton.
Robert; brook in northwestern part of Northampton	Northampton.
Robert; hill in northwestern part of Northampton; elevation, 500 feet	Northampton.
Robert; station in Weston on Massachusetts Central R. R	Framingham.
Robert Meadow; brook in north part of Westhampton	Chesterfield.
Robinson; brook in Pepperell, 3 miles long; tributary to Nashua River	Groton.
Robinson; creek in north part of Pembroke	Abington.
Robinson Hole; between islands of Naushon and Pasque	Gay Head.
Robinsonville; village in North Attleboro	Providence.
Rochdale; village in town of Northbridge, on Providence and Worcester R. R	Blackstone.
Rochdale; village in Leicester, on Boston and Albany R. R	Webster.
Rochdale; pond in Leicester	Webster.
Roche Run; in northwest part of Pembroke	Abington.
Rochester; town in southwestern part of Plymouth County; Indian name, Menchoisett; area, 37 square miles.	Middleboro. New Bedford.
Rochester; village in southern part of town of same name	New Bedford.
Rock; creek on boundary line between Eastham and Orleans, one-half mile long	Wellfleet.
Rock; creek in Orleans, one-half mile long; flows into Cape Cod Bay	Wellfleet.
Rock; island south of Marion, in Ancoot Cove	New Bedford.
Rock; hill in Northboro; elevation, 440 feet	Marlboro.
Rock; pond in Georgetown	Lawrence.
Rock Bottom; village in Stow	Marlboro.
Rock Harbor; village in town of Orleans	Wellfleet.
Rock Island; cove on east coast of Quincy	Boston Bay.
Rock Meadow; brook in Mendon and Uxbridge, tributary to Blackstone River	Blackstone.
Rock Rimmon; hill in Belchertown; elevation, 840 feet	Palmer.

	Atlas sheets.
Rock Station; village in town of Middleboro, on Old Colony R. R., Cape Cod Branch	Middleboro.
Rock Valley; in Holyoke	Springfield.
Rockdale; village in western part of New Bedford	New Bedford
Rockland; town in Plymouth County; area, 11 square miles	Abington.
Rockport; town on eastern extremity of Cape Ann; area, 7 square miles	Gloucester.
Rockport; village in town of same name on Sandy Bay	Gloucester.
Rockville; village in Millis on New York and New England R. R., Woonsocket division	Franklin.
Rockville; village in Haverhill	Haverhill.
Rocky; brook in Sterling and Douglas, 2 miles long; tributary to Stillwater River.	Webster. Worcester.
Rocky; hill in Chelmsford; elevation, 220 feet	Lowell.
Rocky; hill in Groton; elevation, 460 feet	Groton.
Rocky; hill in Oxford; elevation, 840 feet	Webster.
Rocky; hill on boundary line between Winchendon and Ashburnham; elevation, 1,400 feet	Fitchburg.
Rocky; point, southern extremity of West Island, in Fairhaven	New Bedford
Rocky; point on coast of Plymouth	Plymouth.
Rocky; pond in Boylston	Marlboro.
Rocky; pond in Leominster	Fitchburg.
Rocky; pond in southern part of Plymouth	Plymouth.
Rocky Meadow; brook in Middleboro	Middleboro.
Rocky Neck; island in head of Gloucester Harbor, between Gloucester City and East Gloucester	Gloucester.
Rocky Run; brook in Rehoboth and Swansea	Taunton.
Rocky Woods; hills on northeast boundary of Medfield, respectively 300 and 400 feet high	Franklin.
Roger; island in northeastern part of Ipswich surrounded by waters of Rowley River	Salem.
Rollston; hill in Fitchburg; elevation, 820 feet	Fitchburg.
Romp Hole; shallow boat anchorage in north end of Monomoy Island	Chatham.
Rooly Plain; village in western part of Rowley	Salem.
Root; pond in southwestern part of Great Barrington	Sheffield.
Rope; island in New Bedford Harbor opposite city of New Bedford	New Bedford.
Roslindale; village in city of Boston on Boston and Providence R. R	Boston.
Round; cove in northeastern coast of West Island in Fairhaven	New Bedford.
Round; hill in Northfield; elevation, 1,240 feet	Warwick.
Round; hill in Sudbury	Framingham.
Round; hill in Southwick; elevation, 320 feet	Granville.
Round; island between West Island and Sconticut Neck, in Fairhaven	New Bedford.
Round; pond in northwestern part of Great Barrington	Sheffield.
Round; pond in west central part of Barnstable County	Barnstable.
Round; pond in Truro	Wellfleet.
Round; pond in Plymouth	Plymouth.
Round; pond in Haverhill	Haverhill.
Round; cove at head of Pleasant Bay, between Orleans and Chatham	Chatham.

	Atlas sheets.
Round; pond in Tewksbury	Lawrence.
Round Hill; point on southeastern coast of Dartmouth	New Bedford.
Round Meadow; brook in Mendon, tributary to Mill River	Blackstone.
Round Rocks; mountain peak in western part of Cheshire; elevation, 2,480 feet	Greylock.
Round Top; hill in Athol; elevation, 1,260 feet	Winchendon.
Round Top; hill in Chester; elevation, 1,785 feet	Chesterfield.
Rowe; town in Franklin County; area, 25 square miles	Hawley.
Rowe Center; village in town of Rowe	Hawley.
Rowe Lot; hill in Shelburn; elevation, 819 feet	Greenfield.
Rowley; seaboard town on eastern coast of Essex County; area, 19 square miles	Salem.
Rowley; village in southeastern part of town of same name	Salem.
Rowley; river in northeastern part of Essex County, forming portion of boundary line between Ipswich and Rowley, and flowing into Plum Island River	Salem.
Rowley; station in southeastern part of Rowley on Boston and Maine R. R	Salem.
Roxbury; part of city of Boston	Boston.
Royalston; town in Worcester County; area, 44 square miles.	Winchendon. Warwick.
Royalston Center; village in town of Royalston	Winchendon.
Rudd; pond near central part of Becket	Becket.
Ruggles; creek in eastern part of Quincy	Abington.
Ruggles; hill in Hardwick; elevation, 1,040 feet	Barre.
Rumford; river in Mansfield and Norton; flows into Three-Mile River	Taunton.
Run; brook in Sudbury	Framingham.
Run; pond in Dennis	Yarmouth.
Running Gutter; brook in northeastern part of Northampton.	Northampton.
Ruralville; village in Holden	Worcester.
Russ; pond in Prescott	Belchertown.
Russell; town in Hampden County; area, 18 square miles	Granville.
Russell; village in town of same name	Granville.
Russellville; village in Southampton	Granville.
Rutland; town in Worcester County; area, 38 square miles	Worcester. Barre.
Rutland; brook in town of Petersham, 2 miles long	Barre.
Rutland Center; village in town of Rutland	Worcester.
Sachacha; pond in Nantucket	Nantucket.
Sachem; spring in Tisbury, Marthas Vineyard	Marthas Vineyard.
Sacker; brook in Pepperell, 2¼ miles long; tributary to Nissitissit River	Groton.
Sacket; brook tributary to Housatonic River in Hinsdale and Pittsfield	Becket.
Saco; pond in northwestern part of Brimfield	Brookfield.
Saddle; mountain in southwestern part of North Adams; altitude, 3,040 feet	Greylock.
Saddle Rock; mountain in western part of New Ashford; altitude, 3,240 feet	Greylock.
Sagamore; hill in Bourne	Plymouth.
Sagamore Head; point of land 80 feet high on southeast coast of Hull	Boston Bay.

	Atlas sheets.
Saguish Head; point of land at entrance to Duxbury Harbor, Duxbury	Plymouth.
Sailor; island in Hingham Harbor	Boston Bay.
Salem; city in southern part of Essex County; area, 9 square miles.	Boston Bay. Salem.
Salem; harbor in southern part of Essex County between Marblehead and Salem	Salem.
Salem; reservoir on hill about one-half mile north of Salem in Beverly	Salem.
Salem and Lawrence; part of Boston and Maine Railroad system.	
Salem and Lowell; part of Boston and Maine Railroad system.	
Salem Neck; peninsula on northeastern coast of Salem	Salem.
Salisbury; town in Essex County; area, 18 square miles	Newburyport.
Salisbury; village in town of same name on Boston and Maine R. R	Newburyport.
Salisbury Beach; village in town of Salisbury	Newburyport.
Salisbury Plain; river in Norfolk and Bristol counties	Dedham. Abington.
Salisbury Point; village in town of Salisbury	Newburyport.
Salmon; brook in Dunstable	Lowell.
Salmon Falls; village in town of Russell on Boston and Albany R. R	Granville.
Salt; island off eastern coast of Gloucester	Gloucester.
Salt; pond in southwestern part of Falmouth	Falmouth.
Salt; pond on southern coast of Harwich	Yarmouth.
Salt; pond in Plymouth	Plymouth.
Salt Island Ledge; islet off eastern coast of Gloucester	Gloucester.
Salt Meadow; marsh in Truro	Provincetown.
Salten; point on north of Barnstable, extending into Barnstable Harbor	Barnstable.
Salter; point on southeastern coast of Dartmouth	New Bedford.
Sampson; brook in northern part of Kingston flowing into Blackwater Pond	Duxbury.
Sampson; brook in Carver	Middleboro.
Sampson; cove in Assawompsett pond in Lakeville	Middleboro.
Sampson; hill on Chappaquiddick Island in Edgartown, Marthas Vineyard	Marthas Vineyard.
Sampson; island at entrance of Osterville Harbor, southwest of Barnstable	Barnstable.
Sampson; island off south coast of Orleans	Wellfleet.
Sampson; pond in Carver	Middleboro. Plymouth.
Sand; brook in Fitchburg	Fitchburg.
Sand; pond in Harwich	Yarmouth.
Sandersdale; village in Southbridge	Brookfield.
Sanderson; brook in Chester and Blandford, 2 miles long; tributary to Westfield River	Granville.
Sandisfield: town in southeastern part of Berkshire County; area, 54 square miles	Sandisfield.
Sandisfield: village in central part of town of same name	Sandisfield.
Sandwich; town in western part of Barnstable County, bordering on Cape Cod Bay; area, 44 *square miles*.	Barnstable. Falmouth.

	Atlas sheets.
Sandwich; principal village in town of same name	Barnstable. Plymouth.
Sandy; bay in northeastern coast of Rockport	Gloucester.
Sandy; brook in Burlington, tributary to Vine Brook	Boston.
Sandy; brook tributary to Farmington River, rising in Sandisfield, flowing southeasterly into Connecticut	Sandisfield.
Sandy; pond in Lincoln	Framingham.
Sandy; pond in southern part of Plymouth	Plymouth.
Sandy; pond in Ayer	Groton.
Sandy Neck; low sand beach on north of Barnstable	Barnstable.
Sandy Neck; light at entrance to Barnstable Harbor	Barnstable.
Sandy Pond; station on Boston and Lowell R.R., Stony Brook branch, in Groton	Groton.
Sankaty Head; light-house on east coast of Nantucket	Nantucket.
Sason; island in Sengekontacket Pond, Marthas Vineyard, opens into Vineyard Sound	Marthas Vineyard.
Sassaquin; pond in northern part of New Bedford	New Bedford.
Satucket; river in southern part of East Bridgewater	Abington.
Saugus; town in Essex County; area 12 square miles	Boston. Boston Bay.
Saugus; principal village in town of same name on Saugus branch of Boston and Maine R. R	Boston.
Saugus; river in Essex and Middlesex counties, flowing into Lynn Harbor; is about 15 miles long.	Lawrence. Boston. Boston Bay.
Savin; hill in city of Boston	Boston.
Savory; pond in Plymouth	Plymouth.
Savoy; town in northeastern part of Berkshire County; area 36 square miles.	Hawley. Greylock.
Savoy Hollow; village in southern part of Savoy	Greylock.
Sawdy; pond in western part of Westfield	Fall River.
Saw Mill; brook in Leverett	Warwick.
Saw Mill; brook in Concord, 1 mile long; flows into Concord River	Framingham.
Saw Mill; brook in Bridgewater, tributary to Taunton River, 2 miles long	Middleboro.
Saw Mill; hills in western part of Northampton, highest point being 740 feet	Northampton.
Saw Mill; river in Montague, 7 miles long, tributary to Connecticut River	Greenfield.
Saw Mill; river in Leverett	Belchertown.
Sawyer; hill in Berlin	Marlboro.
Saxonville; village in town of Framingham on Saxonville branch Boston and Albany R. R	Framingham.
Scantic; village in Hampden	Palmer.
Scantic; brook in Hampden and Monson	Palmer.
Scargo; hill in Dennis	Yarmouth.
Scargo; lake in Dennis	Yarmouth.
Scarlet; brook in Tyngsboro and Lowell, 1 mile long, tributary to Merrimac River	Lowell.
Schenob; brook, branch of Housatonic River in Sheffield	Sheffield.
Schoolhouse; pond in Brewster	Wellfleet.
Scituate; seaboard town in northeastern part of Plymouth County; area 27 square miles.	Abington. Duxbury.

	Atlas sheets.
Scituate; village in town of same name	Abington.
Scituate; harbor on east coast of Scituate between Crow Point and Cedar Point	Duxbury
Scituate; hill in Cohasset	Abington.
Scituate Harbor; village in eastern part of Scituate	Duxbury.
Scituate Neck; peninsula in northeast part of Scituate	Abington.
Sconticut; point, southern extremity of Sconticut Neck, Fair Haven	New Bedford.
Sconticut Neck; peninsula on southern coast of Fair Haven, extending southeasterly into Buzzards Bay	New Bedford.
Scorton Harbor; creek north of Sandwich flowing into Cape Cod Bay	Barnstable.
Scorton Neck; reef covered with sand hills on south shore of Cape Cod Bay, in town of Sandwich	Barnstable.
Scotland; village in town of Bridgewater	Taunton.
Scotland; hill in Reading; elevation, 160 feet	Lawrence.
Scotland; hill on boundary between Haverhill and Methuen	Haverhill.
Scott; brook in Fitchburg	Fitchburg.
Scott; hill in central part of Ipswich; elevation, 180 feet	Salem.
Scott; reservoir in Fitchburg	Fitchburg.
Scraggy Neck; island in eastern part of Buzzards Bay	Falmouth.
Scribner; hill in Tyngsboro; elevation, 400 feet	Lowell.
Scudding; pond in Taunton	Taunton.
Seal; island in Buzzards Bay south of Mattapoisett Neck	New Bedford.
Seal: island in Merrimac River	Newburyport.
Sear; pond in Yarmouth	Yarmouth.
Searsville; village in west part of Williamsburg	Northampton. Chesterfield.
Second; brook in Buckland, 1 mile long, flows into Deerfield River	Hawley.
Second; pond in Ludlow	Palmer.
Second; branch of Connecticut River in eastern part of Franklin County	Northampton.
Second; branch of Jones River in Kingston	Plymouth.
Second Herring; brook in eastern part of South Scituate	Abington.
Seekonk; town in Bristol County; area 19 square miles	Providence.
Seekonk; village in town of same name	Providence.
Seekonk; brook tributary to Green River in western part of Great Barrington	Sheffield.
Seekonk; river in Alford	Pittsfield.
Sengekontacket; pond in Cottage City and Edgartown, Marthas Vineyard	Marthas Vineyard.
Serganset; river in Taunton and Dighton, 6 miles long, tributary to Taunton River	Taunton.
Seven Mile; river in Attleboro and North Attleboro, flows into Ten Mile River	Providence.
Seven Mile; river tributary to Quaboag River in Spencer	Brookfield. Barre.
Sewammock Neck; peninsula in southern part of Somerset, between Lees and Taunton rivers	Fall River.
Seymour; brook in Granville, 1 mile long	Granville.
Seymour; mountain in southeastern part of Sandisfield; altitude, 1,693 feet	Sandisfield.

	Atlas sheets.
Seymour; pond on southern boundary of Brewster	Yarmouth.
Shag Rocks; rocky islets near Boston Light in Boston Bay	Boston Bay.
Shaker; brook in Hancock and Pittsfield, 2 miles long	Pittsfield.
Shaker; village in Shirley	Groton.
Shaker; village in town of Harvard	Groton.
Shaker; village in Pittsfield	Pittsfield.
Shaker Mill; pond in West Stockbridge	Pittsfield.
Shakum; pond on southern boundary of Framingham	Framingham.
Shallow; pond in Falmouth	Falmouth.
Shallow; pond east of Great Pond, Barnstable	Barnstable.
Shallow; pond in Plymouth	Plymouth.
Shank Pooder; pond in Provincetown	Provincetown.
Sharon; town in Norfolk County; area 25 square miles	Dedham.
Sharon; village in town of same name on Boston and Providence R. R	Deadham.
Sharon Heights; village in town of Sharon on Boston and Providence R. R	Deadham.
Shatterack; brook in Montgomery and Russell, 2 miles long, tributary to Westfield River	Granville.
Shatterack; mountain in town of Montgomery; altitude, 1,200 feet	Granville.
Shatterack. pond in Montgomery	Granville.
Shattuck; brook in Phillipston, 2 miles long; unites with Bigelow Brook to form Swift River	Winchendon.
Shattuck; brook in Leyden and Bernardston and in State of Vermont	Greenfield.
Shattuckville; village in Coleraine	Greenfield.
Shaving; brook in Middleboro	Middleboro.
Shaw; pond in Leicester	Worcester.
Shaw; pond in Ludlow	Palmer.
Shaw; pond in southwestern part of Becket	Becket.
Shawkemo; hill in Nantucket	Nantucket.
Shawshine; river in Essex and Middlesex counties, tributary to Merrimac River.	Framingham. Lawrence.
Sheep; island west of Hull in Boston Bay	Boston Bay.
Sheep; pond in Brewster	Yarmouth.
Sheep Pasture; hill in northeastern part of Manchester; elevation, 140 feet	Salem.
Sheffield; town in southern part of Berkshire County; area, 52 square miles	Sheffield.
Sheffield; village in central part of town of same name	Sheffield.
Sheffield Plain; village in central part of Sheffield	Sheffield.
Shelburne; town in Franklin County; area, 23 square miles	Greenfield.
Shelburne; village in town of same name	Greenfield.
Shelburne Falls; village in town of Shelburne	Greenfield.
Sheldon; hill in Leominster; elevation, 840 feet	Fitchburg.
Sheldonville; village in Wrentham	Franklin.
Shemo; point on coast of Nantucket, extending into Nantucket Harbor	Nantucket.
Shepard; brook in Franklin, tributary to Charles River, 2 miles long	Franklin.
Shepard; pond on western boundary of Foxboro	Franklin.
Shepardville; village in Wrentham	Franklin.
Shepardville; reservoir in Wentham	Franklin.

	Atlas sheets.
Shepherd; brook in Buckland, 1½ miles long; tributary to Clesson Brook	Hawley.
Shepherd; cove in Assonet Bay, Freetown	Taunton.
Shepherd; island in Connecticut River, between southern parts of Hadley and Northampton	Northampton.
Sherborn; town in Middlesex County; area, 17 square miles.	Framingham. Franklin.
Sherborn; village in town of same name on Old Colony R. R., Framingham and Mansfield branch	Franklin.
Shingle; brook in Shelburne and Deerfield, 3 miles long; flows into Deerfield River	Greenfield.
Shingle; hill in southeasterly part of Williamsburg; altitude, 900 feet	Northampton.
Shingle; hill in Shelburne; elevation, 890 feet	Greenfield.
Shingle Island; river tributary to Westport River in northern part of Dartmouth	Fall River.
Shingle Swamp; brook in Orange, 2 miles long	Warwick.
Ship; pond in Plymouth	Plymouth.
Shirley; town in Middlesex County; area, 16 square miles	Groton.
Shirley; village in town of same name, on Fitchburg R. R.	Groton.
Shirley; reservoir in towns of Shirley and Lunenburg	Groton.
Shivenick; pond in southern part of Falmouth	Falmouth.
Shoe String; hill in Marlboro; elevation, 540 feet	Marlboro.
Shooters; island near north end of Monomoy Island	Chatham.
Short; brook in Middleboro, 3½ miles long; tributary to Tispaquin Pond	Middleboro.
Short; creek in Tisbury, Marthas Vineyard; flows into Great Tisbury Pond	Marthas Vineyard.
Shovelfull Shoal; about 1½ miles southeast from Monomoy Point Light, Monomoy Island	Chatham.
Shoves Neck; peninsula in Berkley	Taunton.
Shrewsbury; town in Worcester County; area, 21 square miles.	Marlboro. Worcester.
Shrewsbury; village in town of same name	Marlboro.
Shubart; pond in west central part of Barnstable	Barnstable.
Shumatuscacant; river in eastern part of Abington	Abington.
Shutesbury; town in Franklin County; area, 27 square miles.	Belchertown. Shutesbury.
Shutesbury; village in town of same name	Belchertown.
Siasconset; village in Nantucket, on Nantucket R. R.	Nantucket.
Sibley; reservoir in Sutton	Webster.
Silver; brook in east part of Hanover	Abington.
Silver; brook in towns of Barre and Petersham, 2 miles long	Barre.
Silver; hill in Milford; elevation, 520 feet	Blackstone.
Silver; hill in Haverhill; elevation, 278 feet	Haverhill.
Silver; hill in Weston; elevation, 100 feet	Framingham.
Silver; lake in south part of Pembroke	Abington.
Silver; lake in northwest part of Kingston	Abington.
Silver; lake in Grafton	Blackstone.
Silver; lake in central part of Pittsfield	Becket.
Silver; lake in Wilmington	Lawrence.
Silver Branch; branch of Clam River, in Sandisfield	Sandisfield.
Silver Lake; railway station on Boston and Lowell R. R., in Wilmington	Lawrence.

	Atlas sheets.
Simmons; two ponds in Dennis	Yarmouth.
Simon; hill in central part of South Scituate	Abington.
Simon; pond in southern part of Sandisfield	Sandisfield.
Singletary; brook in Millbury, 1 mile long; tributary to Blackstone River	Webster.
Singletary; pond in Sutton and Millbury	Webster.
Sinking; pond in Acton	Framingham.
Sippican; village in Marion on Sippican Harbor	New Bedford.
Sippican; harbor, arm of Buzzards Bay, projecting into Marion.	Falmouth. New Bedford.
Sippican Neck; peninsula about 2 miles long on southeast coast of Marion	Falmouth.
Sipson; island in Orleans	Chatham.
Sixteen Acres; village in town of Springfield	Palmer.
Skinequit; pond in Harwich	Yarmouth.
Skug; river in Andover and North Reading, flows into Martin Pond	Lawrence.
Sky; hill in Tyringham; elevation, 1,917 feet	Sandisfield.
Slab; brook in Southwick, 3 miles long; tributary to Great Brook	Granville.
Slate; island east of Grape Island in Boston Bay	Boston Bay.
Slater; reservoir in Charlton	Webster.
Sleep; hill on northwestern coast of Castle Neck; elevation, 120 feet	Salem.
Sligo; hill in Marlboro; elevation, 580 feet	Marlboro.
Slocum; brook tributary to Farmington River in southern part of Tolland	Sandisfield.
Slocum; river in southern part of Dartmouth, flowing into Buzzards Bay	New Bedford.
Slocum Neck; peninsula on southern coast of Dartmouth	New Bedford.
Sluice; brook in Shelburne, 2¾ miles long; tributary to North River	Greenfield.
Small; hill in Truro; elevation, 140 feet	Provincetown.
Small; pond in Kingston	Plymouth.
Small; pond in eastern part of Barnstable	Barnstable.
Smead; brook in Greenfield, 2 miles long; tributary to Green River	Greenfield.
Smelt Branch; stream in Kingston	Plymouth.
Smith; brook in Florida, tributary to Deerfield River; 1½ miles long	Hawley.
Smith; brook in Hancock and Pittsfield, 4 miles long; flows into Housatonic branch of Housatonic River	Pittsfield.
Smith; brook in Barre, 1½ miles long	Barre.
Smith; village in town of Enfield, on Boston and Albany R. R., Athol branch	Barre.
Smith Ferry; ferry and village on Connecticut River about 3 miles below Ox Bow, between South Hadley and part of Northampton	Northampton.
Smith Neck; peninsula on southern coast of Dartmouth	New Bedford.
Smith Rocks; rocks lying on northeast coast of Scituate	Abington.
Smithville; village in Barre, on Ware River branch of Boston and Albany R. R	Barre.
Snake; brook in Wayland and on its southern boundary, 2 miles long; flows into Lake Cochituate	Framingham.

	Atlas sheets.
Snake; hill in Tewksbury; elevation, 140 feet	Lawrence.
Snake; hill on boundary line between Ayer and Groton	Groton.
Snake; hill in southern part of Beverly	Salem.
Snake; hill in eastern part of Marshfield; elevation, 100 feet	Duxbury.
Snake; island west of south coast of Winthrop	Boston Bay.
Snake; pond in southwestern part of Sandwich	Falmouth.
Snake Meadow; hill in Westford; elevation, 340 feet	Lowell.
Snipatuit; pond in Rochester	Middleboro.
Snow; pond in Rochester	Middleboro.
Soapstone; hill in Petersham; elevation, 860 feet	Belchertown.
Sodden; brook in eastern part of Westhampton	Chesterfield.
Sodom; mountain in Southwick and Granville; altitude, 1,100 feet	Granville.
Solomon; pond in Northboro	Marlboro.
Somerset; town in west central part of Bristol County; area, 9 square miles.	Taunton. Fall River.
Somerset; village in town of same name	Taunton.
Somerville; city in Middlesex County; area, 4 square miles	Boston.
Soughtfor; pond in Westford	Lowell.
South; brook, tributary to Hoosic River, in southeastern part of Cheshire	Greylock.
South; brook in Bridgewater, tributary to Town River; 3 miles long	Middleboro.
South; mountain in Lenox; altitude, 1,870 feet	Pittsfield.
South; mountain in Granville; altitude, 1,200 feet	Granville.
South; pond in Plymouth	Plymouth.
South; river in Conway, tributary to Deerfield River	Greenfield.
South; river rising in Duxbury and flowing through Marshfield to the sea	Duxbury.
South Acton; village in town of Acton, on Fitchburg R. R.	Framingham.
South Amherst; village in southeastern part of Amherst	Northampton.
South Ashburnham; village in town of Ashburnham	Fitchburg.
South Athol; village in town of Athol, on Boston and Albany R. R., Athol branch	Warwick.
South Attleboro; village in town of Attleboro	Providence.
South Bellingham; village in town of Bellingham	Franklin.
South Berlin; village in town of Berlin	Marlboro.
South Billerica; village in town of Billerica, on Boston and Lowell R. R., Billerica branch	Lowell.
South Boston; part of city of Boston	Boston.
South Brewster; village in town of Brewster	Yarmouth.
South Charlton; village in town of Charlton	Webster.
South Charlton; reservoir in town of Charlton	Webster.
South Chatham; village in town of Chatham	Yarmouth.
South Chelmsford; village in Chelmsford, on Framingham and Lowell R. R	Lowell.
South Dartmouth; village in eastern part of Dartmouth	New Bedford.
South Deerfield; village in southern part of Deerfield	Northampton
South Dennis; village in town of Dennis	Yarmouth.
South Duxbury; village in southeastern part of Duxbury	Duxbury.
South Duxbury; station on Old Colony R. R., in southeastern part of Duxbury	Duxbury.
South Easton; village in town of Easton	Dedham.
South Egremont; village in eastern part of Egremont	Sheffield.

	Atlas sheet.
South Fitchburg: village in town of Fitchburg	Fitchburg.
South Framingham: village in town of Framingham, on Boston and Albany R. R.	Framingham.
South Gardner: village in town of Gardner, on Fitchburg R. R., Worcester division	Fitchburg.
South Gardner: reservoir in town of Gardner	Fitchburg.
South Georgetown: village in southern part of Georgetown	Salem.
South Groveland: village in Groveland, on Boston and Maine R. R., Georgetown branch	Lawrence.
South Hadley. town in southern part of Hampshire County; area, 22 square miles.	Springfield. Northampton.
South Hadley: village in central part of town of same name	Northampton.
South Hadley Falls: village in town of South Hadley	Springfield.
South Hanover: village in south part of Hanover	Abington.
South Hanson: village in south central part of Hanson	Abington.
South Hanson; station in south part of Hanson	Abington.
South Harwich; village in town of Harwich	Yarmouth.
South Hawley: village in town of Hawley	Hawley.
South Hingham: village in south part of Hingham	Abington.
South Lancaster: village in town of Lancaster	Marlboro.
South Lawrence: part of city of Lawrence lying on south side of Merrimac River	Lawrence.
South Lee; village in town of Lee, on Housatonic R. R.	Pittsfield.
South Leverett: village in town of Leverett	Belchertown.
South Lincoln: village in town of Lincoln	Framingham.
South Lynnfield: village in Lynnfield, on Wakefield branch of eastern division Boston and Maine R.R.	Salem. Lawrence.
South Marlboro; village in town of Marlboro, on Fitchburg R. R., Marlboro branch	Marlboro.
South Meadow; brook in Shrewsbury; flows into Lake Quinsigamond; 2 miles long	Marlboro.
South Meadow; brook in Carver, 6 miles long, tributary to Weweantic River	Middleboro.
South Middleboro; village in town of Middleboro, on Old Colony R. R., Cape Cod branch	Middleboro.
South Milford; village in town of Milford	Blackstone.
South Monson; village in town of Monson, on New London Northern R. R.	Palmer.
South Natick; village in town of Natick	Framingham.
South Orleans; village in town of Orleans	Wellfleet.
South Pocasset; village in southwestern part of Bourne	Falmouth.
South Purchase; swamp in Middleboro	Middleboro.
South Quincy; village in east part of Quincy	Abington.
South Royalston; village in town of Royalston, on Fitchburg R. R.	Winchendon.
South Salem; village in eastern part of Salem, on Salem Harbor	Salem.
South Sandisfield; village in southwestern part of Sandisfield	Sandisfield.
South Scituate; village in eastern part of town of same name.	Abington.
South Seekonk; village in town of Seekonk	Providence.
South Sherborn; village in town of Sherborn, on Old Colony R. R., Framingham and Mansfield branch	Franklin.
South Shrewsbury; village in town of Sherborn	Marlboro.
South Spencer; village in town of Spencer	Brookfield.

	Atlas sheets.
South Sudbury; village in town of Sudbury, on Massachusetts Central R. R	Framingham.
South Sugar Loaf; point 709 feet high in southeastern part of Deerfield	Northampton.
South Sutton; village in town of Sutton	Blackstone.
South Truro; village in town of Truro	Wellfleet.
South Wachusett; brook in Princeton, 5 miles long, flows into Quinapoxet Pond	Worcester.
South Walpole; village in town of Walpole, on Old Colony R. R., Framingham and Mansfield branch	Franklin.
South Wareham; village in town of Wareham, on Old Colony R. R., Cape Cod branch	Middleboro.
South Wellfleet; village in town of Wellfleet, on Old Colony R. R., Cape Cod division	Wellfleet.
South Westport; village in the eastern part of Westport	Fall River.
South Weymouth; village in southern part of Weymouth	Abington.
South Williamstown; village in southern part of Williamstown	Greylock.
South Wilmington Station; village in Woburn, on Boston and Lowell R. R	Lawrence.
South Worthington; village in southeast part of Worthington	Chesterfield.
South Yarmouth; village in town of Yarmouth	Yarmouth.
Southampton; town in Hampshire County; area, 29 square miles	Chesterfield. Granville. Springfield.
Southampton; village in town of same name	Springfield.
Southboro; town in Worcester County; area, 16 square miles.	Marlboro. Framingham.
Southboro; village in town of same name	Marlboro.
Southbridge; town in Worcester County; area, 21 square miles	Brookfield.
Southbridge; principal village in town of same name	Brookfield.
Southfield; village in central part of New Marlboro	Sandisfield.
Southville; village in town of Southboro, on Boston and Albany R. R	Marlboro.
outhwick; town in Hampden County; area, 30 square miles.	Springfield. Granville.
outhwick; village in town of same name on New Haven and Northampton R. R.	Granville.
outhwick; creek tributary to Hoosic River, in eastern part of Adams	Greylock.
outhwick; hill in Southwick; elevation, 380 feet	Granville.
outhwick Jog; a departure from a right line in south boundary of Massachusetts, by which a small rectangular area which, under the definition of the boundary would have formed part of Connecticut, was included in Massachusetts. This was done by the surveyors in running the line in accordance with the wish of Oliver Wolcott, who preferred to be under the jurisdiction of Massachusetts	Granville.
Spark; hill in Westford; elevation, 400 feet	Lowell.
Spaulding; brook in Westford, connects Key Pond with Sought-for Pond	Powell.
Spectacle; island in Boston Bay, lying southeast of Boston	Boston Bay.
Spectacle; pond in central part of Falmouth	Falmouth.

	Atlas sheets.
Spectable; pond in Sandwich; area, about 150 acres	Barnstable.
Spectacle; pond, containing 113 acres, in northern part of Sandisfield	Sandisfield.
Spectacle; pond in Lancaster	Groton.
Spectacle; pond in Wareham	Plymouth.
Spectacle; pond in Wilbraham	Palmer.
Spectacle; two ponds in eastern part of New Salem	Warwick.
Spencer; town in Worcester County; area, 34 square miles	Worcester. Barre. Webster. Brookfield.
Spencer; village in town of same name, on Boston and Albany R. R.	Brookfield. Webster.
Spencer; brook in Concord and Carlisle, 3 miles long	Lowell. Framingham.
Spencer Center; village in town of Spencer	Worcester.
Spickett; mountain in northern part of Lynn	Boston Bay
Spickett; river in Methuen and Lawrence	Lawrence.
Spindle; hill in Stow; elevation, 400 feet	Marlboro.
Spofford; pond in Boxford	Lawrence.
Spoon; hill in Marlboro; elevation, 480 feet	Marlboro.
Spooner; pond in northern part of Plymouth	Plymouth.
Spot; pond in Stoneham	Boston.
Sprague; hill in north part of Bridgewater	Abington.
Spring; brook in Bedford	Framingham.
Spring; brook in Mendon	Blackstone.
Spring; brook in Bridgewater, tributary to Taunton River, 1 mile long	Middleboro.
Spring; brook in Bedford	Lowell.
Spring; creek flowing from Great Marshes into Barnstable Harbor	Barnstable.
Spring; lake in Needham	Framingham.
Spring; pond in Groton	Groton.
Spring; pond in southwest part of Salem	Boston Bay.
Spring Hill; stream in north part of Sandwich, flowing into Cape Cod Bay	Barnstable.
Spring Hill; beach in north part of Sandwich	Barnstable.
Springfield; city in Hampden County; area, 36 square miles	Springfield. Palmer.
Springfield; reservoir in Ludlow	Palmer.
Springfield, Athol, and Northern; part of Boston and Albany Railroad system, running northeastward from Springfield and Athol.	
Springville; village in Winchendon	Winchendon.
Spruce; hill in west part of Westhampton	Chesterfield.
Spruce; hill in southwestern part of Florida; elevation, 2,588 feet	Greylock.
Spurr; lake in Sheffield	Sheffield.
Sky; pond in Abington	Boston.
Squam; pond in Nantucket	Nantucket.
Squam; river in central part of Gloucester, connecting Annisquam Harbor with Gloucester Harbor	Gloucester.
Squam Head; point on east coast of Nantucket	Nantucket.

	Atlas sheets.
Squam Light; fifth order, fixed white light at east entrance of Annisquam Harbor on Wigwam Point, Gloucester; lantern 50 feet high, visible 12¼ miles	Gloucester.
Squannacook; river in Townsend and Shirley	Groton.
Squannakonk; swamp in Rehoboth	Taunton.
Squantum; village in Quincy	Boston.
Squash Meadow; pond in Cottage City, Marthas Vineyard	Marthas Vineyard.
Squaw; island at east entrance of New Harbor	Barnstable.
Squibnocket; village in town of Chilmark, Marthas Vineyard.	Gay Head.
Squibnocket; beach on coast of Gay Head and Chilmark, Marthas Vineyard	Gay Head.
Squibnocket; hill in Chilmark, Marthas Vineyard	Gay Head.
Squibnocket; pond in Gay Head and Chilmark, Marthas Vineyard	Gay Head.
Squirrel; hill in north part of Hingham	Abington.
Stacey; brook in southeast part of Lynn	Boston Bay.
Stage; harbor in southern shore of Chatham, entered from Vineyard Sound	Chatham.
Stanley; island in Merrimac River	Haverhill.
State Line; village on boundary line between Canaan, N. Y., and West Stockbridge, Mass., on Boston and Albany R. R.	Pittsfield.
State Line; station on New London Northern R. R., in Monson.	Palmer.
State Muster Grounds; in Framingham	Framingham.
Steele; brook in Rowe, 1½ miles long, flows into Pelham Brook.	Hawley.
Steep; brook in northwestern part of Fall River, flowing into Taunton River	Fall River.
Steep Brook; village in northwestern part of Fall River, on Taunton River	Fall River.
Steep Gutter; brook in Barre, 2 miles long	Barre.
Steep Rock; village in Natick	Framingham.
Steerage Rock; hill in Brimfield; elevation, 1,240 feet	Brookfield.
Sterling; town in Worcester County; area, 33 square miles	Marlboro. Worcester.
Sterling; mountain in northern part of Mount Washington; altitude, 1,960 feet	Sheffield.
Sterling Camp Grounds; near Sterling Junction, in Sterling.	Worcester.
Sterling Center; village in Sterling on Fitchburg R. R.	Worcester.
Sterling Junction; village and railway junction in Sterling	Worcester.
Stetson; pond in southwest part of Pembroke	Abington.
Steven; brook in Barre and Rutland, 1½ miles long	Barre.
Steven; brook in Holland	Brookfield.
Steven; brook in north part of Worthington	Chesterfield.
Steven; pond in Lawrence	Lawrence.
Steward; island east of Marion, in Sippican Harbor	New Bedford.
Steward; pond in Barnstable	Barnstable.
Stile; pond in Boxford	Lawrence.
Stile; reservoir in Spencer and Leicester	Webster.
Still; brook in Agawam	Springfield.
Still; river in Bolton and Harvard, 2 miles long, tributary to Nashua River	Marlboro.
Still River; village in town of Harvard	Marlboro.
Still River; station in Harvard, on Boston and Maine R. R.	Marlboro.
Stillwater; river in Princeton, Sterling, and West Boylston, 5 miles long, tributary to Nashua River	Worcester.

	Atlas sheets.
Stirrup; brook in Northboro	Marlboro.
Stirrup; hill in Marlboro; elevation, 454 feet	Marlboro.
Stockbridge; town in Berkshire County; area, 24 square miles.	Pittsfield.
Stockbridge; village in town of same name	Pittsfield.
Stockbridge Bowl; pond in town of Stockbridge	Pittsfield.
Stoddard; pond in Winchendon	Winchendon.
Stodge Meadow; pond in town of Ashburnham	Fitchburg.
Stone; brook in northwest part of Goshen	Chesterfield.
Stone; brook in Auburn, 2 miles long	Webster.
Stone; hill in western part of Brookfield; elevation, 900 feet	Brookfield.
Stone House; hill in town of Holden; elevation, 1,100 feet	Worcester.
Stone Wall; beach on south coast of Chilmark, Marthas Vineyard	Gay Head.
Stoneham; town in Middlesex County; area, 7 square miles	Boston.
Stoneham; principal village in town of same name on Boston and Lowell R. R	Boston.
Stoneville; village in Auburn	Webster.
Stoneville; reservoir in Auburn	Webster.
Stony; brook in South Hadley	Springfield.
Stony; brook in southeast part of South Scituate	Abington.
Stony; brook in Lincoln and Weston	Framingham.
Stony; brook in Westford and Chelmsford, 7 miles long, tributary to Merrimac River	Lowell.
Stony; brook in southern part of Lynn	Boston Bay.
Stony; brook in Middleboro	Middleboro.
Stony; brook in Carver, 2½ miles long	Middleboro.
Stony; brook in Hyde Park and Boston, 4 miles long	Boston.
Stony; brook in Granby	Palmer.
Stony Brook; village in Weston	Framingham.
Stop; river in Medfield	Franklin.
Stoughton; town in Norfolk County; area, 17 square miles	Dedham.
Stoughton; village in town of same name, on Stoughton branch Boston and Providence R. R	Dedham.
Stow; town in Middlesex County; area, 18 square miles	Marlboro. Framingham.
Stow; village in town of same name	Marlboro.
Stow; brook in Framingham and Southboro	Framingham.
Straitsmouth; island near eastern coast of Rockport, near Gap Head	Gloucester.
Straw Hollow; village in Boylston	Marlboro.
Strawberry; hill in Acton; elevation, 340 feet	Framingham.
Strawberry; hill in western part of Hull	Boston Bay.
Strawberry; point on southeastern border of Mattapoiset, south of Pine Neck Cove	New Bedford.
Stream; river in eastern part of Abington	Abington.
Strobridge; hill in Northfield; elevation, 940 feet	Warwick.
Strong; island near Chatham	Chatham.
Strong; pond in Newton	Boston.
Strongwater; brook in Tewksbury, 4 miles long, tributary to Shawshine River	Lawrence.
Stump; pond in north part of Halifax	Abington. Middleboro.
Sturbridge: town in Worcester County; area, 38 square miles.	Brookfield.
Sturbridge; village in town of same name	Brookfield.

	Atlas sheets.
; point on southeast coast of Mashpee	Barnstable.
k in Webster, 2 miles long, flows into Lake Chau- amaug	Webster.
k in West Brookfield, 2 miles long, tributary to g pond	Barre.
l in Framingham	Framingham.
vn in Middlesex County; area, 26 square miles	Framingham.
id in Framingham	Framingham.
er in Middlesex County	Marlboro. Framingham.
ter; village in town of Sudbury, on Old Colony	Framingham.
mountain in southern part of New Ashford; alti- feet	Greylock.
ook flowing through northeastern part of Whately	Northampton.
ll in Webster; elevation, 760 feet	Webster.
in Northboro	Marlboro.
l in Maynard; elevation, 380 feet	Framingham.
town in southern part of Franklin County; area, miles	Northampton.
village in western part of town of same name, on nt River	Northampton.
in Greenwich, 3 miles long, flows into Swift River	Belchertown.
n Dana	Belchertown.
ok in Dighton, 2 miles long, tributary to Sarganset	Taunton.
e on line between Peabody and Lynnfield	Lawrence. Salem.
age on south coast of Nantucket	Nantucket.
k in Dennis, flows into Cape Cod Bay	Wellfleet. Yarmouth.
n in Worcester County; area, 36 square miles	Blackstone. Webster.
ge in town of same name	Webster.
ok in north part of Pembroke	Abington.
; town in Essex County; area, 3 square miles	Boston Bay.
; station in southwest part of Swampscott	Boston Bay.
in Yarmouth	Yarmouth.
in Dennis	Yarmouth.
in North Reading	Lawrence.
river in Dennis, 2 miles long, flows into Nan- und	Yarmouth.
wn in southwestern part of Bristol County; area, miles.	Taunton. Providence. Fall River.
llage in southern part of town of same name	Fall River.
tory; village in Swansea	Taunton.
nountain in Granville; altitude, 1,503 feet	Granville.
southwestern part of Falmouth	Falmouth.
n Wareham	Plymouth.
n Hampshire, tributary to Chicopee River	Chesterfield. Palmer. Winchendon. Belchertown.

	Atlas sheets
Swift Neck; peninsula projecting northeasterly from western portion of Wareham, into Wareham River	Falmouth.
Swift River; village in east part of Cummington	
Taconic Range; range of broken hills trending southward through western part of Berkshire County.	Pittsfield. Berlin.
Tallow; hill in Winchendon; elevation, 1,100 feet	Winchendon.
Tamett; brook in Lakeville, flows into Assawompsett Pond	Middleboro.
Tapley; brook tributary to Goldthwait Brook, in eastern part of Peabody	Salem.
Tapleyville; station in southern part of Danvers	Salem.
Tarkill; brook in Agawam, 1 mile long	Springfield.
Tarpaulin; cove on coast of Naushon, in town of Gosnold	Gay Head.
Tarpaulin Cove; light-house on coast of Naushon Island, in town of Gosnold	Gay Head.
Tarrot; hill in Blandford; elevation, 1,303 feet	Granville.
Tasseltop; village in Douglas	Blackstone.
Tatnuck; village in Worcester	Worcester.
Tatum Station; village in West Springfield	Springfield.
Taunton; city in Bristol County; area 49 square miles	Taunton.
Taunton; river in southeastern Massachusetts, flowing into Narragansett Bay.	Taunton. Fall River. Middleboro.
Taylor; brook tributary to Quaboag River in Warren and Brimfield	Brookfield.
Taylor; pond in Chatham	Yarmouth.
Tekoa; mountain in Montgomery; altitude 1,211 feet	Granville.
Telegraph; hill in Plymouth; elevation 220 feet	Plymouth.
Telegraph; hill in central part of Marshfield; elevation 200 feet	Duxbury.
Tempe Knob; point of about 120 feet elevation on most southerly peninsula of Wareham	Falmouth.
Templeton; town in Worcester County; area 32 square miles	Winchendon.
Templeton Center; village in town of Templeton	Winchendon.
Ten Mile; river in North Attleboro and Attleboro and in Rhode Island	Providence.
Ten Pound; island in Gloucester Harbor	Gloucester.
Teneriffe; hill in western part of Brookfield; elevation 880 feet	Brookfield.
Tenneyville; village in Palmer on Boston and Albany R. R.	Palmer.
Terrydiddle; hill in Rehoboth; altitude 140 feet	Taunton.
Tespaquin; pond in Middleboro	Middleboro.
Tewksbury; town in Middlesex County; area 24 square miles.	Lowell. Lawrence.
Tewksbury Center; village on Salem and Lowell R. R. in Tewksbury	Lawrence.
Tewksbury; railroad junction in town of Tewksbury on Salem and Lowell R. R	Lawrence
Thatch; island at entrance of Poponesset Bay on southeast coast of Mashpee	Barnstable.
Thatch Bank; islet about one-half mile off northwestern coast of Gloucester	Gloucester.
Thatcher; brook in Attleboro, tributary to Ten Mile River	Providence.
Thatcher; island off Cape Ann, Rockport	Gloucester.
The Cove; bay opening into Barnstable Harbor, Barnstable	Barnstable.
The Graves; island in Boston Bay	Boston Bay.
The Nook*; arm of Kingston Bay indenting coast of Duxbury, west of Captains Hill*	*Duxbury.*

	Atlas sheets.
The Throne; hill on boundary between Pepperell and Groton; elevation, 484 feet	Groton.
Thermopylæ; gap at west end of Holyoke range	Northampton.
Third; brook in Buckland, 1 mile long; flows into Deerfield River	Hawley.
Third Herring; brook on southwest boundary of South Scituate.	Abington.
Thompson; brook in Berkley and Lakeville, 1 mile long	Middleboro.
Thompson; brook tributary to Green River, in western part of New Ashford	Greylock.
Thompson; hill in western part of Gloucester; elevation, 220 feet	Gloucester.
Thompson; island in Boston Harbor	Boston.
Thompson; pond in New Salem	Belchertown.
Thompson; village in central part of Essex	Salem.
Thompsonville; village in Newton	Boston.
Thorndike; village in town of Palmer	Palmer.
Three Cornered; pond in Plymouth	Plymouth.
Three-Mile; brook in Agawam, 3 miles long	Springfield.
Three-Mile; hill in northern part of Great Barrington; elevation, 1,240 feet	Sheffield.
Three-Mile; pond in northeastern part of Sheffield, containing 104 acres and drained by Iron Works Brook	Sheffield.
Three-Mile; river, 8 miles long, in Norton, Taunton, and Dighton, tributary to Taunton River	Taunton.
Three Rivers; village in Palmer, on New London Northern R. R.	Palmer.
Tibbs Meadow; brook in south part of Pembroke	Abington.
Tilden; island in North River, in northwestern part of Marshfield	Duxbury.
Tillison: brook in Granville	Granville.
Tilton; hill in eastern part of Ipswich; elevation, 160 feet	Salem.
Tinker; island east of Marblehead	Boston Bay.
Tisbury; town in Dukes County; area, 32 square miles	Marthas Vineyard.
Tisbury; river in Chilmark and Tisbury, Marthas Vineyard	Gay Head.
Tispaquin; pond in Middleboro	Middleboro.
Titicut; village in Middleboro	Middleboro.
Titicut; swamp in Raynham	Taunton.
Tob; hill in Westhampton; elevation, 1,245 feet	Chesterfield.
Toby; mountain in central part of Sunderland; altitude, 1,275 feet	Northampton.
Todd; mountain in Charlemont; altitude, 1,711 feet	Hawley.
Tolland; town in Hampden county; area 31 square miles	Granville. Sandisfield.
Tolland; village in central part of town of same name	Sandisfield.
Tom; hill on western boundary of Natick; elevation 280 feet	Framingham.
Tom; mountain in Holyoke; elevation, 1160 feet	Springfield.
Tom Ball; hill in West Stockbridge; elevation 1,930 feet	Pittsfield.
Tom Nevers Head; point of land on south coast of Nantucket	Nantucket.
Tomblin; hill on eastern boundary of Shrewsbury; elevation 500 feet	Marlboro.
Tomlin; swamp in western part of Lynn	Boston Bay.
Tonset; village in town of Orleans	Wellfleet.
Toovhka; pond in Nantucket	Nantucket.
Tophet: brook tributary to Hoosic River in eastern part of Adams	Greylock.
Tophet; *swamp in north part of Carlisle*	Lowell.

	Atlas sheets.
Topsfield; town near central part of Essex county; area, 13 square miles	Salem.
Topsfield; village in town of same name	Salem.
Torrey; pond in east part of South Scituate	Abington.
Tour: mountain in Easthampton and South Hadley; altitude, 1,200 feet	Springfield.
Tower: mountain in Hancock; altitude 2,185 feet	Pittsfield.
Tower Hill; station in Weston on Massachusetts Central R. R.	Framingham.
Town; brook draining Billington Sea into Plymouth Harbor	Plymouth.
Town; cove on northern boundary line of Orleans; opens into Nauset Harbor	Wellfleet.
Town; hill in Topsfield; elevation 240 feet	Salem.
Town; hill rising back of village of Provincetown	Provincetown.
Town; hill in central part of Ipswich; elevation 160 feet	Salem.
Town; island in Barnstable Harbor, Barnstable	Barnstable.
Town; river in north part of Bridgewater	Middleboro. Abington.
Town; swamp in west part of Scituate	Abington.
Town Hill; village in northwestern part of Sandisfield	Sandisfield.
Town Meadow; brook in Leicester, two miles long, flows into Greenville reservoir	Webster.
Town River; bay on east coast of Quincy	Boston Bay.
Townsend; town in Middlesex County; area, 31 square miles	Fitchburg. Groton.
Townsend; village in town of same name, on Fitchburg R. R., Petersburg and Shirley Branch	Groton.
Townsend; hill in town of same name; elevation, 586 feet	Groton.
Townsend; hill in southwestern part of Fall River; elevation, 280 feet	Fall River.
Townsend Harbor; village in town of Townsend, on Fitchburg R. R., Petersburg and Shirley Branch	Groton.
Towser Neck; point of land extending into Haskell Swamp, Rochester	New Bedford.
Train; hill on eastern boundary of Natick	Framingham.
Trap Rock Ledge; hill in Deerfield; elevation, 440 feet	Greenfield.
Trapfall; brook in Ashby, 4 miles long, flows into Willard Brook	Fitchburg.
Traphole; brook in Norwood, Walpole, and Sharon	Dedham.
Trapp; pond in Edgartown, Marthas Vineyard; opens into Sengekontucket Pond	Marthas Vineyard.
Treadwell Island; creek in eastern part of Ipswich	Salem.
Tremont; village in Wareham	Middleboro.
Triangle; pond in northern part of Plymouth	Plymouth.
Triangle; pond in Sandwich	Barnstable.
Triphammer; pond in eastern part of Hingham	Abington.
Tripple; brook in Southampton, 2 miles long, tributary to Manhan River	Springfield.
Trouant; island in North River, Scituate	Duxbury.
Trout; brook in Templeton	Winchendon.
Trout; brook in Princeton and Holden, 3 miles long, tributary to Quinepoxet River	Worcester.
Trout; brook in Dover	Franklin.
Trout; brook in Dracut, 1½ miles long, tributary to Richardson *Brook*	Lowell.

	Atlas sheets.
Trout; brook in Townsend, 1¼ miles long, tributary to Squannacook River	Groton.
Trout; brook tributary to middle branch of Westfield River, in Peru and Worthington	Becket.
Trull; brook in Tewksbury, 2 miles long, tributary to Merrimac River	Lowell.
Truro; town in Barnstable County; area, 22 square miles	Wellfleet. Provincetown.
Truro; village in town of same name	Wellfleet.
Tuck; point on southern coast of Beverly	Salem.
Tuckernuck; island in Nantucket County, north of western extremity of Nantucket	Muskeget.
Tuft; brook tributary to Quinebaug River, in Warren, Worcester, and Hampden counties	Brookfield.
Tuft; hill in town of New Braintree; elevation, 1,179 feet	Barre.
Tuft; village in Dudley	Webster.
Tuft Branch; stream in Dudley, 4 miles long, tributary to Quinebaug River	Webster.
Tuft College; buildings on Walnut Hill, which is partly in Medford and partly in Somerville	Boston.
Tully; brook in Warwick and Orange, flows into west branch of Tully River, 5 miles long	Warwick.
Tully; mountain in Orange; altitude, 1,160 feet	Winchendon.
Tully; river in Orange and Athol	Winchendon.
Tully; meadow in Orange	Warwick.
Tullyville; village in Orange	Warwick.
Tupper; island in Barnstable Harbor, Barnstable	Barnstable.
Turkey; hill in central part of Ipswich; elevation, 240 feet	Salem.
Turkey; hill in Lunenburg; elevation, 647 feet	Groton.
Turkey; hill in east part of Westhampton	Chesterfield.
Turkey; hill in western part of Cohasset	Abington.
Turkey; hill in Newburyport; elevation, 140 feet	Newburyport.
Turkey Hill; brook in Paxton and Spencer, 2 miles long	Worcester.
Turkey Hill; pond in Paxton and Rutland	Worcester.
Turner; hill in southwestern part of Ipswich; elevation, 260 feet	Salem.
Turner; pond in Lancaster	Groton.
Turner Falls; village in Montague, on Fitchburg R. R.	Greenfield.
Turner Mills; village in Bristol County on line between Dartmouth and New Bedford	New Bedford.
Turnpike; station on Old Colony R. R., Taunton Branch, in Lakeville	Middleboro.
Turtle; pond in Greenwich	Belchertown.
Turtle; pond in Yarmouth	Yarmouth.
Tussock; brook tributary to Jones River, in northeastern part of Kingston	Duxbury.
Tuttle; brook tributary to middle branch of Westfield River in northern part of Middlefield	Becket.
Twelve Mile; brook in Monson and Wilbraham, 6 miles long, tributary to Chicopee River	Palmer.
Twopenny Loaf; low, sandy point on northern coast of Gloucester, west of Coffin Beach	Gloucester.
Tyer; cove, part of Great Tisbury Pond, Marthas Vineyard	Marthas Vineyard.
Tyng; island in Merrimac River, in Tyngsboro	Lowell.

	Atlas sheets.
Tyng; pond in Tyngsboro	Lowell.
Tyngsboro; town in Middlesex County; area, 19 square miles	Lowell.
Tyngsboro; village in town of same name, on Boston, Lowell and Nashua R. R	Lowell.
Tyringham; mountain town in Berkshire County; area, 20 square miles.	Becket. Sandisfield.
Tyringham; village in town of same name	Sandisfield.
Uncas; pond in Franklin	Franklin.
Uncatena; island in Buzzards Bay, west of Woods Holl	Falmouth.
Unchechehaton, pond in Lunenburg	Groton.
Undine; brook in Mount Washington, draining Undine Lake. Also called Guilford Brook	Sheffield.
Undine; lake in northeastern part of Mount Washington. Also called Guilford Pond	Sheffield.
Undine; mountain in northeastern part of Mount Washington; altitude, 2,195 feet	Sheffield.
Union Square; part of town of Somerville	Boston.
Unionville; village in Franklin, on New York and New England R. R., Franklin Branch	Franklin.
Unionville; village in Holden	Worcester.
Unkamet; brook tributary to Housatonic River, in Pittsfield	Becket.
Unquetenassett; brook in Dunstable and Groton, 4 miles long, tributary to Nashua River	Groton.
Unquomonk; brook tributary to Mill River, in southwestern part of Williamsburg	Northampton.
Unquomonk; hill in southwestern part of Williamsburg; elevation, 1,180 feet	Northampton.
Upper; pond in Belchertown	Belchertown.
Upper Gate; pond in eastern part of Barnstable	Barnstable.
Upper Naukeag; pond in Ashburnham	Fitchburg.
Upper Plain; village in Hingham	Abington.
Upton; town in Worcester County; area, 21 square miles	Blackstone.
Upton; village in town of same name	Blackstone.
Upton; hill in Peabody; elevation, 200 feet	Lawrence.
Uxbridge; town in Worcester County; area, 30 square miles	Blackstone.
Uxbridge; village in town of same name, on Providence and Worcester R. R	Blackstone.
Valley; brook in Warwick	Warwick.
Valley; brook in Granville, tributary to east branch of Farmington River	Granville.
Valley; swamp in western part of South Scituate	Abington.
Van Deusenville; village and railway station in northwestern part of Great Barrington on William River	Sheffield.
Varnum; brook in Pepperell tributary to Nashua River	Groton.
Vaughan; hill in town of Bolton; elevation, 640 feet	Marlboro.
Venturer; pond in Springfield	Springfield.
Very; pond near summit of Taconic range in Hancock	Berlin.
Vine; brook in Billerica, Burlington, and Lexington, 6 miles long, tributary to Shawshine River.	Lawrence. Lowell. Boston.
Vineyard; hill in western part of Hamilton; elevation, 120 feet	Salem.
Vineyard; sound between Cape Cod and Elizabeth Islands on the northwest and Marthas Vineyard on the southeast	Falmouth.
Vineyard Haven; village in Tisbury, Marthas Vineyard	Marthas Vineyard. Wellfleet.

	Atlas sheets.
Vineyard Haven; harbor on coast of Tisbury and Cottage City, Marthas Vineyard	Marthas Vineyard.
Vision; mountain in Wilbraham; altitude, 860 feet	Palmer.
Vosburg; hill in southern part of Great Barrington	Sheffield.
Vose; hill in Maynard; elevation, 260 feet	Framingham.
Waban; lake in Wellesley	Framingham.
Wachusett; mountain in Princeton; altitude, 2,000 feet	Worcester.
Wachusett; pond on boundary line between Princeton and Westminster	Fitchburg.
Wachusett; village in Westminster	Fitchburg.
Wachusett; station on Fitchburg R. R., in Fitchburg	Fitchburg.
Wading; river in Mansfield and Norton, tributary to Three-Mile River	Taunton.
Wadkin; hill in Douglas; elevation, 820 feet	Webster.
Wadsworth; village in Franklin on New York and New England R. R., main line	Franklin.
Wadsworth; hill in central part of Becket; elevation, 1,880 feet.	Becket.
Wakeby; village in Sandwich	Barnstable.
Wakeby; pond in Mashpee, containing about 375 acres, connected with Mashpee pond on the south	Barnstable.
Wakefield; town in Middlesex County; area, 10 square miles.	Boston. Lawrence.
Wakefield, principal village in town of same name on Wakefield branch of eastern division of Boston and Maine R. R.	Lawrence.
Walcott; hill in west part of Williamsburg	Chesterfield.
Walden; hill in Peabody; elevation, 220 feet	Lawrence.
Walden; lake in Concord	Framingham.
Wales; town in Hampden County; area, 16 square miles	Palmer. Brookfield.
Wales; principal village in town of same name	Brookfield.
Wales; brook tributary to Quinebaug River in Wales and Brimfield	Brookfield.
Wales; pond in center of town of same name	Brookfield.
Walker; brook in town of Mason, N. H., and town of Townsend, Mass., 6 miles long	Fitchburg.
Walker; brook in Chester, flowing into west branch of Westfield River	Chesterfield.
Walker; brook tributary to Westfield River in Becket	Becket.
Walker; mountain in Sturbridge	Brookfield.
Walker; pond in eastern part of Sturbridge	Brookfield.
Walker; pond in Harwich	Yarmouth.
Walkerville; village in Natick	Framingham.
Wall; pond in southern part of Plymouth	Plymouth.
Wallum; pond in State of Rhode Island and in town of Douglas	Webster.
Wallum Pond; hill in Douglas; elevation, 778 feet	Webster.
Walnut; hill in Orange; elevation, 840 feet	Warwick.
Walnut; hill in north part of Hanover	Abington.
Walnut; hill in northern part of Williamsburg; altitude, 1,440 feet	Northampton.
Walnut; hill in Blandford; elevation, 1,760 feet	Granville.
Walnut; hill in southwest part of Chesterfield	Chesterfield.
Walnut; hill in Buckland; elevation, 1,240 feet	Hawley.
Walnut; hill in Brookline; elevation, 300 feet	Boston.
Walnut; hill on eastern boundary of Goshen	Chesterfield.

	Atlas sheets.
Walnut Tree; hill in south part of Scituate	Abington.
Walpole; town in Norfolk County; area, 22 square miles	Dedham. Franklin.
Walpole; village in town of same name on New York and New England R. R., main line	Franklin.
Waltham; city in Middlesex County; area, 15 square miles	Boston. Framingham.
Waltham; principal village in town of same name on Fitchburg R. R	Boston.
Wankinco Neck; point of land east of Wareham River, in Wareham	Plymouth
Wankinco; river flowing into Wareham River and forming part of boundary between Carver and Plymouth	Plymouth.
Waupenum; brook in Pittsfield	Pittsfield.
Waquoit; bay, arm of Vineyard Sound, indenting southern coast of Barnstable County	Falmouth.
Waquoit; village in southeastern part of Falmouth	Falmouth.
Ward; hill in Bradford; elevation, 272 feet	Haverhill.
Ward; hill in Phillipston; elevation, 1,340 feet	Winchendon.
Ward; mount in Marlboro; elevation, 400 feet	Framingham.
Ward; pond in Ashburnham	Fitchburg.
Ward; pond in southern part of Becket	Sandisfield.
Ward; stream in Worthington, about 4 miles long, unites with Watt stream at Ringville to form Little River	Chesterfield.
Ward Hill; station in Bradford on Boston and Maine R. R	Lawrence.
Ware; town in Hampshire County; area, 28 square miles	Belchertown. Barre. Palmer. Brookfield.
Ware; principal village in town of same name, on Ware River branch, Boston and Albany R. R	Barre.
Ware; river tributary to Chicopee River, in central part of the State.	Worcester. Barre. Fitchburg. Palmer.
Ware Center; village in town of Ware	Belchertown.
Wareham; town in southerly part of Plymouth County, on northern border of Buzzards Bay; area, 41 square miles.	Middleboro. Plymouth. New Bedford. Falmouth.
Wareham; principal village in town of same name	Plymouth.
Wareham; river draining southeastern part of Plymouth County and flowing into northern part of Buzzards Bay	Falmouth.
Wareham Center; village in town of Ware	Plymouth.
Warner; mountain near eastern bank of Connecticut River, in town of Hadley; elevation, 500 feet	Northampton.
Warner; mountain in southeastern part of Great Barrington; altitude, 1,835 feet	Sheffield.
Warner; pond in Greenwich	Belchertown.
Warren; town in Worcester County; area, 29 square miles	Brookfield. Palmer.
Warren; principal village in town of same name	Brookfield.
Warren; brook in Upton	Blackstone.
Warren; cove on coast of Plymouth	Plymouth.

	Atlas sheets.
Warren; fort on George Island, Boston Bay	Boston Bay.
Warren; hill in Stow; elevation, 440 feet	Marlboro.
Warren; point on southern coast of Wareham, projecting southwesterly into Buzzards Bay at mouth of Wareham River	Falmouth.
Warren; reservoir in Swansea	Taunton.
Warren; river in Swansea and Rehoboth and in State of Rhode Island	Providence.
Warwick; town in Franklin County; area, 38 square miles	Warwick.
Warwick; village in town of same name	Warwick.
Wash; brook in Sudbury, flows into Sudbury River	Framingham.
Washing; pond in Nantucket	Nantucket.
Washington; town in central part of Berkshire County; area, 37 square miles	Becket.
Washington; village in town of same name	Becket.
Washington; village, part of Boston	Boston.
Washington Station; village and railway station in Washington	Becket.
Watatic; mountain in Ashburnham; altitude, 1,840 feet	Fitchburg.
Watatic; pond in town of Ashburnham	Fitchburg.
Watcha; pond in Tisbury, Marthas Vineyard	Marthas Vineyard.
Water; river in southern part of Essex County, on line of Danvers and Peabody	Salem.
Waterbug; hill in Blackstone; elevation, 440 feet	Blackstone.
Watertown; town in Middlesex County; area, 4 square miles	Boston.
Watertown; village in town of same name, on Watertown branch, Fitchburg R. R	Boston.
Waterville; village in Winchendon	Winchendon.
Waterville; village in Middleboro	Middleboro.
Watson; pond in Taunton	Taunton.
Watt; stream in Worthington, 4 miles long; unites with Ward Stream at Ringville to form Little River	Chesterfield.
Wattle; pond in Groton	Groton.
Watuppa; pond of fresh water in Fall River, extending southward to Westport and covering nearly 5,000 acres	Fall River.
Wauwinet; village in Nantucket	Nantucket.
Waverly; village in Belmont, on Fitchburg R. R	Boston.
Wayland; town in Middlesex County; area, 17 square miles	Framingham.
Wayland; village in town of same name, on Massachusetts Central R. R	Framingham.
Webb; brook in Billerica, 2 miles long, tributary to Shawshine River	Lawrence.
Webster; town in Worcester County; area, 16 square miles	Webster.
Webster; principal village in town of same name, on New York and New England R. R., Southbridge branch	Webster.
Webster Place; station in southern part of Marshfield	Duxbury.
Wedge; pond in Winchester	Boston.
Weedweeder; two ponds in Nantucket	Nantucket.
Week; pond in southwestern part of Sandwich	Falmouth.
Weir; village in town of Taunton, on main line Old Colony R. R.	Taunton.
Weir; river in northeast part of Hingham	Boston Bay.
Wekepeke; brook in Lancaster, Leominster, and Sterling	Worcester. Marlboro.
Well; creek flowing into north side of Barnstable Harbor	Barnstable.

	Atlas sheets.
Wellesley; town in Norfolk County; area, 11 square miles	Framingham.
Wellesley; village in town of same name, on Boston and Albany R. R	Framingham.
Wellesley Hills; village in town of Wellesley, on Boston and Albany R. R	Framingham.
Wellfleet; town in Barnstable County; area, 23 square miles	Wellfleet.
Wellfleet; village in town of same name, on Wellfleet Harbor and on Old Colony R. R., Cape Cod division	Wellfleet.
Wellfleet; harbor on west coast of town of same name	Wellfleet.
Wellingsly; village in northern part of Plymouth	Plymouth.
Wenatuxet; village in Plympton	Middleboro.
Wenatuxet; river in Halifax, Plymouth, and Carver, 6 miles long	Middleboro.
Wenaumet Neck; peninsula on western coast of Bourne, extending about 2 miles southwesterly into Buzzards Bay	Falmouth.
Wendell; town in Franklin County; area, 29 square miles	Warwick.
Wendell; village in town of same name	Warwick.
Wenham; town in southeastern part of Essex County; area, 9 square miles	Salem.
Wenham; village in eastern part of town of same name	Salem.
Wenham; lake on boundary line between Wenham and Beverly	Salem.
Wenham; pond in Carver	Middleboro.
Wenham; swamp in western part of Wenham and Hamilton	Salem.
Wenham; village in Carver	Middleboro.
Wenuchus; lake in central part of Lynn	Boston Bay.
Wessonville; village in Westboro	Marlboro.
West; beach on southeastern coast of Beverly	Salem.
West; brook, tributary to Mill River in Whately	Northampton.
West; brook, tributary to Hoosic River, in Cheshire and Williamstown	Greylock.
West; brook, left tributary to Quinebaug River, in Bromfield	Brookfield.
West; brook in Hampden and Wilbraham	Palmer.
West; brook in Orange and Athol	Warwick.
West; creek in eastern part of Rowley, flowing into Rowley River	Salem.
West; hill in Marlboro; elevation, 580 feet	Marlboro.
West; hill in town of Monson; elevation, 940 feet	Palmer.
West; hill in west part of Worthington; elevation, 1,800 feet	Chesterfield.
West; island in Buzzards Bay, south of Nasketucket Bay	New Bedford.
West; mountain in Brimfield	Brookfield.
West; mountain in Bernardston; altitude, 1,145 feet	Greenfield.
West; pond in Bolton	Marlboro.
West; river in towns of Upton, Northbridge, and Uxbridge; flows into Blackstone River	Blackstone.
West; village in North Reading	Lawrence.
West Abington; village in north part of Abington	Abington.
West Acton; village in town of Acton, on Fitchburg R. R	Framingham.
West Andover; village in Andover	Lawrence.
West Andover; station on Boston and Lowell R. R., in town of Andover	Lawrence.
West Barnstable; village in Barnstable, on Cape Cod branch, Old Colony R. R	Barnstable.
West Becket; village in southwestern part of Becket	Becket.
West Bedford; village in Bedford	Framingham.

	Atlas sheets.
West Berkley; village in town of Berkley	Taunton.
West Berlin; village in town of Berlin, on Massachusetts Central R. R	Marlboro.
West Boxford; village in Boxford	Lawrence.
West Boylston; town in Worcester County; area, 25 square miles	Worcester.
West Boylston; village in town of same name, on Massachusetts Central R. R	Worcester.
West Branch; brook in Heath tributary to west branch Green River	Hawley.
West Brewster; village in town of Brewster	Yarmouth.
West Bridgewater; town in Plymouth County; area, 17 square miles	Abington. Dedham.
West Brimfield; station in town of Brimfield, on Boston and Albany R. R.	Palmer.
West Brookfield; town in Worcester County; area, 20 square miles	Barre. Brookfield.
West Brookfield; principal village in town of same name	Brookfield.
West Chelmsford; village in town of Chelmsford, on Stony Brook R. R	Lowell.
West Chop; light-house on north coast of Tisbury, Marthas Vineyard	Marthas Vineyard.
West Cummington; village in northwest part of Cummington	Chesterfield.
West Dedham; village in town of Dedham	Dedham.
West Dennis; village in town of Dennis	Yarmouth.
West Dudley; village in town of Dudley, on New York and New England R. R	Webster.
West Duxbury; village in west part of Duxbury	Abington.
West Falmouth; village and railway station, in western part of Falmouth	Falmouth.
West Farms; village in southwestern part of Northampton	Northampton.
West Farms; village in Westfield	Granville.
West Fitchburg; village in Fitchburg, on Fitchburg R. R.	Fitchburg.
West Gloucester; village in western part of Gloucester	Gloucester.
West Gloucester; station (railway) near central part of Gloucester	Gloucester.
West Granville; village in town of Granville	Granville.
West Groton; village in Groton, on Fitchburg R. R	Groton.
West Hanover; village in west part of Hanover	Abington.
West Harwich; village in town of Harwich	Yarmouth.
West Hatfield; village and railway station, in southwestern part of Hatfield	Northampton.
West Hawley; village in town of Hawley	Hawley.
West Hingham; village in Western part of Hingham	Abington.
West Hollow; brook in Leyden and in State of Vermont	Greenfield.
West Leominster; station on Old Colony R. R., Fitchburg branch, in Leominster	Fitchburg.
West Leyden; village in town of Leyden	Greenfield.
West Manchester; village and railway station, in southwestern part of Manchester	Salem.
West Mansfield; village in town of Mansfield, on Boston and Providence R. R	Taunton.
West Meadow; brook in Brockton and West Bridgewater	Dedham.

	Atlas sheets.
West Meadow; hill in Haverhill; elevation, 387 feet	Haverhill.
West Medford; village in town of Medford, on Boston and Lowell R. R.	Boston.
West Medway; village in town of Medway, on New York and New England R. R., Woonsocket division	Franklin.
West Millbury; village in town of Millbury	Webster.
West New Boston; village on Buck River, in the eastern part of Sandisfield	Sandisfield.
West Newbury; town in Essex County; area, 15 square miles.	Newburyport.
West Newbury; village in town of same name	Newburyport.
West Newton; village in town of Newton, on Boston and Albany R. R.	Boston.
West Northfield; village in town of Northfield, on Connecticut River R. R	Warwick.
West Orange; village in town of Orange on Fitchburg R. R.	Warwick.
West Otis; village in southwestern part of Otis	Sandisfield.
West Parish; village in Westfield	Granville.
West Peabody; railroad junction in northwestern part of Peabody	Salem.
West Quincy; village in town of Quincy, on Old Colony R. R., Granite branch	Dedham.
West Rocky Gutter; brook in Middleboro, 24 miles long; tributary to Double Brook	Middleboro.
West Roxbury; village in city of Boston, on Boston and Providence R. R	Boston.
West Rutland; village in town of Rutland	Worcester.
West Sandwich; village in Bourne	Plymouth.
West Scituate; village in west part of South Scituate	Abington.
West Springfield; town in Hampden County; area, 15 square miles	Springfield.
West Springfield; village in town of same name, on Boston and Albany R. R	Springfield.
West Sterling; villege in Sterling	Worcester.
West Stockbridge; village in town of same name	Pittsfield.
West Stockbridge; town in Berkshire County; area, 20 square miles	Pittsfield.
West Stockbridge; mountain in Stockbridge; altitude, 1,850 feet	Pittsfield.
West Stockbridge Center; village in the town of West Stockbridge	Pittsfield.
West Sutton; village in town of Sutton	Webster.
West Tisbury; village in town of Tisbury, Marthas Vineyard.	Marthas Vineyard.
West Townsend; village in Townsend, on Fitchburg R. R., Peterboro and Shirley branch	Groton.
West Upton; village in town of Upton	Blackstone.
West Wachusett; brook in Princeton, 2 miles long	Worcester.
West Ware; village in town of Ware, on Boston and Albany R. R., Athol branch	Belchertown.
West Warren; village in western part of Warren	Brookfield.
West Waushaccum; pond in Sterling	Worcester.
West Whately; village in western part of Whately, on West Brook	Northampton.
West Worthington; village in northwest part of Worthington.	Chesterfield.
West Wrentham; village in town of Wrentham	Franklin.

	Atlas sheets.
West Yarmouth; village in town of Yarmouth	Yarmouth.
Westboro; town in Worcester County; area, 17 square miles	Marlboro.
Westboro; village in town of same name, on Boston and Albany R. R.	Marlboro.
Westbrook; village in northern part of Hatfield, on Mill River.	Northampton.
Westfield; town in Hampden County; area, 41 square miles	Springfield. Granville.
Westfield; village in town of same name, on New Haven and Northampton R. R	Granville. Springfield.
Westfield; river, right-hand branch of Connecticut River, in western part of the State	Granville. Becket. Chesterfield. Westfield. Greylock. Springfield.
Westfield Little; river in Blandford, Russell, and Westfield, 10 miles long; tributary to Westfield River	Springfield. Granville.
Westford; town in Middlesex County; area, 32 square miles	Lowell.
Westford; village in town of same name	Lowell.
Westford; station on Nashua, Acton and Boston R. R., in Westford Station	Lowell.
Westminster; town in Worcester County; area, 37 square miles	Fitchburg.
Westminster; village in town of same name	Fitchburg.
Westminster; station in Westminster, on Fitchburg R. R.	Fitchburg.
Weston; town in Middlesex County; area, 17 square miles	Framingham.
Weston; village in town of same name	Framingham.
Weston; station on Massachusetts Central R.R., in Weston	Framingham.
Westport; town in Bristol County; area, 52 square miles	Fall River.
Westport; harbor at mouth of Westport River, Westport	Fall River.
Westport Harbor; village in southwestern part of Westport	Fall River.
Westport Mills; village on line between Westport and Dartmouth	Fall River.
Westport Point; village in southern part of Westport	Fall River.
Westhampton; town in Hampshire County; area, 28 square miles	Chesterfield.
Westvale; village in town of Concord, on Fitchburg R. R.	Framingham.
Westville; village in Taunton	Taunton.
Westville; village in Sturbridge	Brookfield.
Weweantic; river in Carver and Wareham	Middleboro. Plymouth. Falmouth.
Weymouth; town in Norfolk County; area, 19 square miles	Abington.
Weymouth; harbor on northeast coast of Weymouth	Abington.
Weymouth Back; river forming northeast boundary of Weymouth	Boston Bay. Abington.
Weymouth Fore; river on east coast of Quincy	Abington. Boston Bay.
Weymouth Landing; village in Weymouth Fore River, Weymouth	Abington.
Whale; cove in eastern part of Rockport	Gloucester.
Whately; town in southern part of Franklin County, on Connecticut River; area, 22 square miles	Northampton.
Whately Center; village in central part of Whately	Northampton.

	Atlas sheets.
Wheeler; brook in Blandford, tributary to Pebble Brook	Granville.
Wheeler; hill in Berlin	Marlboro.
Wheeler; point of land in Gloucester between Mill River and Squam River	Gloucester.
Wheelock; hill on boundary between Charlton and Brookfield.	Brookfield.
Wheelockville; village in town of Uxbridge, on Providence and Worcester R. R	Blackstone.
Whetstone; brook in Wendell, 5 miles long; tributary to Miller River	Warwick.
Whipple; hill in central part of Danvers; elevation, 160 feet	Salem.
Whispering; hill in Woburn; elevation, 260 feet	Boston.
Whitbeck; mountain on line between Mount Washington and Egremont; altitude, 1,840 feet	Sheffield.
Whitcomb; mountain in eastern part of Florida; altitude, 2,300 feet	Greylock.
White; brook in Agawam, one-half mile long; tributary to Westfield River	Springfield.
White; hill in western part of Essex; elevation, 160 feet	Salem.
White; pond in Hudson	Framingham.
White; pond in southern part of Plymouth	Plymouth.
White; pond in Dedham	Dedham.
White; pond on boundary between Lancaster and Leominster.	Groton.
White; pond on western boundary of Harwich	Yarmouth.
White; pond in Concord	Framingham.
White; pond in Athol	Warwick.
White Head; on western side of Cohasset Harbor, Cohasset	Abington.
White Island; pond in southern part of Plymouth	Plymouth.
White Lily; pond in northeastern part of Otis	Sandisfield.
White Loaf; mount in Southampton; altitude, 460 feet	Springfield.
White Oak; island in Middleboro, between Bartlett Brook and Taunton River; altitude, 100 to 120 feet	Middleboro.
White Neck; peninsula between Weymouth Fore River and Mill Cove, in northwest part of Weymouth	Abington.
Whitehall; village in Rutland	Worcester.
Whitehall; pond in Hopkinton	Blackstone.
Whiteman; brook in Ashburnham, tributary to Stodge Meadow pond; one-half mile long	Fitchburg.
Whiteman; brook in Ashburnham	Fitchburg.
Whitemore; hill in town of Lancaster; elevation, 435 feet	Marlboro.
Whiteville; village in Mansfield	Dedham.
Whitin; pond in Northbridge, Sutton, and Uxbridge	Blackstone.
Whiting; pond in Wrentham	Franklin.
Whitinville; village in town of Northbridge	Blackstone.
Whitman; town in Plymouth County; area, 7 square miles	Abington.
Whitman; pond in Weymouth	Abington.
Whitman; river in Westminster and Ashburnham, 6 miles long.	Fitchburg.
Whitmanville; village in Westminster	Fitchburg.
Whitmarsh; brook in northwest part of Worthington	Chesterfield.
Whitney; station in Sherborn, on Boston and Albany R. R., Milford branch	Franklin.
Whittenton; village in Taunton, on main line Old Colony R. R.	Taunton.
Whittier; hill in Amesbury; elevation, 200 feet	Newburyport.
Whortleberry; hill in Dracut; elevation, 400 feet	Lowell.
Whortleberry; hill in West Brookfield; elevation, 968 feet	Barre.

	Atlas sheets.
Whortleberry; pond in Weymouth	Abington.
Wickaboag; pond in West Brookfield, flowing into Quaboag River	Brookfield.
Wickaboag; pond in West Brookfield	Barre.
Wicket; island situated near center of Onset Bay, about one-half mile southeast of village of Onset	Falmouth.
Wickett; brook in Wendell, 5 miles long; tributary to Miller River	Warwick.
Wickett; pond in Wendell	Warwick.
Wiggin; pond in Plymouth	Plymouth.
Wigwam; brook in Mendon, tributary to Blackstone River	Blackstone.
Wigwam; hill in town of Mendon; elevation, 540 feet	Blackstone.
Wigwam; hill in town of Wilbraham; elevation, 860 feet	Palmer.
Wigwam; hill in West Brookfield; elevation, 920 feet	Barre.
Wigwam; pond in Dedham	Dedham.
Wilbraham; town in Hampden County; area, 23 square miles	Palmer.
Wilbraham; village in town of same name	Palmer.
Wilcox; mountain peak in northwestern part of Monterey; altitude, 2,155 feet	Sheffield.
Wild; harbor, arm of Buzzards Bay indenting coast of Falmouth, south of Nye Neck	Falmouth.
Wild Cat; brook in south part of South Scituate	Abington.
Wild Cat; hill in Ashland; elevation, 400 feet	Framingham.
Wild Cat; hill in south part of South Scituate	Abington.
Wild Cat; mountain in Bernardston; altitude, 1,059 feet	Greenfield.
Wilder; brook in Gardner, 3 miles long	Winchendon.
Wilder; river in Charlemont and Heath, 3 miles long; flows into Deerfield River	Hawley.
Wilkinsonville; village in Sutton	Blackstone.*
Will; hill in Middleton; elevation, 220 feet	Lawrence.
Willard; brook in Ashby and Townsend, 6 miles long	Fitchburg.
William; hill in Charlton; elevation, 960 feet	Webster.
William; pond in Marlboro	Marlboro.
William; river in western part of Berkshire County, flowing south through Richmond and West Stockbridge into Housatonic River in Great Barrington.	Pittsfield. Sheffield.
Williamsburg; village in central part of Williamsburg on Mill River	Northampton.
Williamsburg; town in northern part of Hampshire County; area, 26 square miles.	Northampton. Chesterfield.
Williamstown; town in extreme northwestern part of Berkshire County; area, 51 square miles.	Berlin. Greylock.
Williamstown; village in northern part of town of same name	Greylock.
Williamsville; village in West Stockbridge	Pittsfield.
Williamsville; village in town of Hubbardston	Barre.
Willimansett; village in Chicopee on Connecticut River R. R	Springfield.
Willis; hill in Middleboro; elevation, 200 feet	Middleboro.
Willis; hill in Montague	Greenfield.
Willis; hill in Sudbury	Framingham.
Willis; pond in Sudbury	Framingham.
Willis; reservoir in Douglas	Webster.
Willow; brook tributary to Mystic River	Boston.

	Atlas sheets.
Willow; point in Great Quittacas Pond	Middleboro.
Wilmington; town in Middlesex County; area, 18 square miles	Lawrence.
Wilmington Center; village in town of Wilmington on Lawrence Branch of Boston and Lowell R. R	Lawrence.
Wilmington Junction; railway junction on Salem and Lowell R. R. and Boston and Maine R. R., Wilmington	Lawrence.
Wilmington; station on main line of Boston and Maine R. R., in Wilmington	Lawrence.
Wilmington; station on Boston and Lowell R. R., in Wilmington	Lawrence.
Wilson; brook in Warwick	Warwick.
Winchell; mountain in Granville; altitude, 1,362 feet	Granville.
Winchendon; town in Worcester County; area, 45 square miles	Winchendon.
Winchendon; village in town of same name on Boston and Albany R. R., Ware River branch	Winchendon.
Winchendon Center; village in town of Winchendon	Winchendon.
Winchester; town in Middlesex County; area, 6 square miles..	Boston.
Winchester; principal village in town of same name on Boston and Lowell R. R	Boston.
Windmill; point of land on northwest coast of Hull	Boston Bay.
Windsor; town in northeastern part of Berkshire County; area, 37 square miles.	Hawley Chesterfield. Becket. Greylock.
Windsor; pond in town of same name	Hawley.
Windsor Hill; village in central part of Windsor	Greylock.
Wine; brook in Phillipston, 2 miles long	Winchendon.
Wing; cove of Buzzards Bay, on southeastern coast of Marion.	Falmouth.
Wings Neck; light-house on southwestern extremity of Wenaumet Neck, in Bourne; fixed white, fifth order; lantern 44 feet above sea level and visible 12 miles	Falmouth.
Winimusset; brook in New Braintree, 1½ miles long; tributary to Ware River	Barre.
Winneconnet; village in Norton	Taunton.
Winneconnet; pond in Norton	Taunton.
Winning; pond in Billerica	Lowell.
Winter; hill in Dracut; elevation, 210 feet	Lowell.
Winter; pond in Winchester	Boston.
Winthrop; town in Suffolk County; area, 2 square miles	Boston Bay.
Winthrop; fort on Governors Island, in Boston Harbor	Boston.
Winthrop; pond in Holliston	Franklin.
Winthrop Head; cliff or headland on southeast coast of Winthrop	Boston Bay.
Wipple; station in Palmer, on Ware River branch of Boston and Albany R. R	Palmer.
Wire; village in Spencer	Worcester.
Witch; brook in Townsend, 2 miles long; tributary to Squannacook River	Groton.
Woburn; city in Middlesex County; area, 14 square miles ...	Boston. Lawrence.
Woburn; principal village in town of same name, on Woburn branch of Boston and Lowell R. R	Boston.

	Atlas sheets.
; island in Buzzards Bay, about 1 mile northwest of **Island**	Falmouth.
k in Townsend	Groton.
n Southbridge; elevation, 700 feet	Granville.
op in Townsend	Groton.
; brook in Rehoboth	Providence.
ill in Southboro	Marlboro.
Heights; village in Quincy, on Old Colony R. R.	Boston.
ok in Middleboro, 1½ miles long, tributary to Tespa- nd	Middleboro.
in Andover; elevation, 340 feet	Lawrence.
in Douglas and Webster; elevation, 939 feet	Webster.
d in Ludlow	Palmer.
d in Middleboro	Middleboro.
; village upon Long Point, Provincetown	Provincetown.
; light-house in Wood End in Provincetown	Provincetown.
e; island in Merrimac	Newburyport.
; point on southern coast of Beverly, east of Beverly	Salem.
; station in western part of Essex, on Boston and . R	Salem.
; hill in North Andover; elevation, 320 feet	Lawrence.
mountain in central part of New Marlboro; altitude, t	Sandisfield.
l; village in southwestern part of Falmouth	Falmouth.
village in Hopkinton	Blackstone.
; village in town of Shirley	Groton.
city in Worcester County; area, 32 square miles	Worcester. Webster.
brook in Coleraine, 2 miles long, tributary to ver	Greenfield.
d; head of land 80 feet high on southern side nce to Weir River on north coast of Hingham	Boston Bay.
n; town in Hampshire County; area, 33 square	Chesterfield.
n; brook in Agawam, 1 mile long	Springfield.
n **Center**; village in central part of Worthington	Chesterfield.
n **Corners**; village in north central part of Worth-	Chesterfield.
e on west side of Monomoy Island	Chatham.
town in Norfolk County; area, 35 square miles	Franklin.
; village in town of same name	Franklin.
ook in Billerica, 2 miles long, tributary to Shaw- ver	Lawrence.
ook in northern part of Mount Washington	Sheffield.
nds in Ashby	Fitchburg.
er tributary to Mill River in eastern part of Wil- rg	Northampton.
ll in northern part of Manchester; elevation, 160	Salem.
ll in northeast part of Braintree	Abington.
ke in central part of Lynn	Boston Bay.
llage in central part of Lynn	Boston Bay.

	Atlas sheets.
Wyoming; village in Melrose on Boston and Maine R. R., west division	Boston.
Yarmouth; town in Barnstable County; area, 26 square miles.	Yarmouth. Barnstable.
Yarmouth; village in town of same name	Yarmouth.
Yarmouth; camp-meeting grounds in west part of Yarmouth	Barnstable.
Yarmouth Port; village in northwest part of Yarmouth	Barnstable.
Yokun; river in Lenox	Pittsfield.
Yokun Seat; hill in Lenox; elevation, 2,080 feet	Pittsfield.
Youth; pond in Methuen	Lawrence.
Zaohary; pond in Upton	Blackstone.
Zion; hill in Winchester; elvation, 300 feet	Boston.
Zoar; village in town of Charlemont	Hawley.

DEPARTMENT OF THE INTERIOR

BULLETIN

OF THE

UNITED STATES

GEOLOGICAL SURVEY

No. 117

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

UNITED STATES GEOLOGICAL SURVEY
J. W. POWELL, DIRECTOR

A GEOGRAPHIC DICTIONARY OF CONNECTICUT

BY

HENRY GANNETT

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

	Atlas sheets.
Wheeler; brook in Blandford, tributary to Pebble Brook	Granville.
Wheeler; hill in Berlin	Marlboro.
Wheeler; point of land in Gloucester between Mill River and Squam River	Gloucester.
Wheelock; hill on boundary between Charlton and Brookfield.	Brookfield.
Wheelockville; village in town of Uxbridge, on Providence and Worcester R. R.	Blackstone.
Whetstone; brook in Wendell, 5 miles long; tributary to Miller River	Warwick.
Whipple; hill in central part of Danvers; elevation, 160 feet.	Salem.
Whispering; hill in Woburn; elevation, 260 feet	Boston.
Whitbeck; mountain on line between Mount Washington and Egremont; altitude, 1,840 feet	Sheffield.
Whitcomb; mountain in eastern part of Florida; altitude, 2,300 feet	Greylock.
White; brook in Agawam, one-half mile long; tributary to Westfield River	Springfield.
White; hill in western part of Essex; elevation, 160 feet	Salem.
White; pond in Hudson	Framingham.
White; pond in southern part of Plymouth	Plymouth.
White; pond in Dedham	Dedham.
White; pond on boundary between Lancaster and Leominster.	Groton.
White; pond on western boundary of Harwich	Yarmouth.
White; pond in Concord	Framingham.
White; pond in Athol	Warwick.
White Head; on western side of Cohasset Harbor, Cohasset.	Abington.
White Island; pond in southern part of Plymouth	Plymouth.
White Lily; pond in northeastern part of Otis	Sandisfield.
White Loaf; mount in Southampton; altitude, 460 feet	Springfield.
White Oak; island in Middleboro, between Bartlett Brook and Taunton River; altitude, 100 to 120 feet	Middleboro.
White Neck; peninsula between Weymouth Fore River and Mill Cove, in northwest part of Weymouth	Abington.
Whitehall; village in Rutland	Worcester.
Whitehall; pond in Hopkinton	Blackstone.
Whiteman; brook in Ashburnham, tributary to Stodge Meadow pond; one-half mile long	Fitchburg.
Whiteman; brook in Ashburnham	Fitchburg.
Whitemore; hill in town of Lancaster; elevation, 435 feet	Marlboro.
Whiteville; village in Mansfield	Dedham.
Whitin; pond in Northbridge, Sutton, and Uxbridge	Blackstone.
Whiting; pond in Wrentham	Franklin.
Whitinville; village in town of Northbridge	Blackstone.
Whitman; town in Plymouth County; area, 7 square miles	Abington.
Whitman; pond in Weymouth	Abington.
Whitman; river in Westminster and Ashburnham, 6 miles long.	Fitchburg.
Whitmanville; village in Westminster	Fitchburg.
Whitmarsh; brook in northwest part of Worthington	Chesterfield.
Whitney; station in Sherborn, on Boston and Albany R. R., Milford branch	Franklin.
Whittenton; village in Taunton, on main line Old Colony R. R.	Taunton.
Whittier; hill in Amesbury; elevation, 200 feet	Newburyport.
Whortleberry; hill in Dracut; elevation, 400 feet	Lowell.
Whortleberry; hill in West Brookfield; elevation, 968 feet	Barre.

	Atlas sheets.
Whortleberry; pond in Weymouth	Abington.
Wickaboag; pond in West Brookfield, flowing into Quaboag River	Brookfield.
Wickaboag; pond in West Brookfield	Barre.
Wicket; island situated near center of Onset Bay, about one-half mile southeast of village of Onset	Falmouth.
Wickett; brook in Wendell, 5 miles long; tributary to Miller River	Warwick.
Wickett; pond in Wendell	Warwick.
Wiggin; pond in Plymouth	Plymouth.
Wigwam; brook in Mendon, tributary to Blackstone River	Blackstone.
Wigwam; hill in town of Mendon; elevation, 540 feet	Blackstone.
Wigwam; hill in town of Wilbraham; elevation, 860 feet	Palmer.
Wigwam; hill in West Brookfield; elevation, 920 feet	Barre.
Wigwam; pond in Dedham	Dedham.
Wilbraham; town in Hampden County; area, 23 square miles.	Palmer.
Wilbraham; village in town of same name	Palmer.
Wilcox; mountain peak in northwestern part of Monterey; altitude, 2,155 feet	Sheffield.
Wild; harbor, arm of Buzzards Bay indenting coast of Falmouth, south of Nye Neck	Falmouth.
Wild Cat; brook in south part of South Scituate	Abington.
Wild Cat; hill in Ashland; elevation, 400 feet	Framingham.
Wild Cat; hill in south part of South Scituate	Abington.
Wild Cat; mountain in Bernardston; altitude, 1,059 feet	Greenfield.
Wilder; brook in Gardner, 3 miles long	Winchendon.
Wilder; river in Charlemont and Heath, 3 miles long; flows into Deerfield River	Hawley.
Wilkinsonville; village in Sutton	Blackstone.
Will; hill in Middleton; elevation, 220 feet	Lawrence.
Willard; brook in Ashby and Townsend, 6 miles long	Fitchburg.
William; hill in Charlton; elevation, 960 feet	Webster.
William; pond in Marlboro	Marlboro.
William; river in western part of Berkshire County, flowing south through Richmond and West Stockbridge into Housatonic River in Great Barrington.	Pittsfield. Sheffield.
Williamsburg; village in central part of Williamsburg on Mill River	Northampton.
Williamsburg; town in northern part of Hampshire County; area, 26 square miles.	Northampton. Chesterfield.
Williamstown; town in extreme northwestern part of Berkshire County; area, 51 square miles.	Berlin. Greylock.
Williamstown; village in northern part of town of same name	Greylock.
Williamsville; village in West Stockbridge	Pittsfield.
Williamsville; village in town of Hubbardston	Barre.
Willimansett; village in Chicopee on Connecticut River R. R	Springfield.
Willis; hill in Middleboro; elevation, 200 feet	Middleboro.
Willis; hill in Montague	Greenfield.
Willis; hill in Sudbury	Framingham.
Willis; pond in Sudbury	Framingham.
Willis; reservoir in Douglas	Webster.
Willow; brook tributary to Mystic River	Boston.

	Atlas sheets
Willow; point in Great Quittacas Pond	Middleboro.
Wilmington; town in Middlesex County; area, 18 square miles	Lawrence.
Wilmington Center; village in town of Wilmington on Lawrence Branch of Boston and Lowell R. R	Lawrence.
Wilmington Junction; railway junction on Salem and Lowell R. R. and Boston and Maine R. R., Wilmington	Lawrence.
Wilmington; station on main line of Boston and Maine R. R., in Wilmington	Lawrence.
Wilmington; station on Boston and Lowell R. R., in Wilmington	Lawrence.
Wilson; brook in Warwick	Warwick.
Winchell; mountain in Granville; altitude, 1,362 feet	Granville.
Winchendon; town in Worcester County; area, 45 square miles	Winchendon.
Winchendon; village in town of same name on Boston and Albany R. R., Ware River branch	Winchendon.
Winchendon Center; village in town of Winchendon	Winchendon.
Winchester; town in Middlesex County; area, 6 square miles	Boston.
Winchester; principal village in town of same name on Boston and Lowell R. R	Boston.
Windmill; point of land on northwest coast of Hull	Boston Bay.
Windsor; town in northeastern part of Berkshire County; area, 37 square miles.	Hawley Chesterfield. Becket. Greylock.
Windsor; pond in town of same name	Hawley.
Windsor Hill; village in central part of Windsor	Greylock.
Wine; brook in Phillipston, 2 miles long	Winchendon.
Wing; cove of Buzzards Bay, on southeastern coast of Marion.	Falmouth.
Wings Neck; light-house on southwestern extremity of Wenaumet Neck, in Bourne; fixed white, fifth order; lantern 44 feet above sea level and visible 12 miles	Falmouth.
Winimusset; brook in New Braintree, 1½ miles long; tributary to Ware River	Barre.
Winneconnet; village in Norton	Taunton.
Winneconnet; pond in Norton	Taunton.
Winning; pond in Billerica	Lowell.
Winter; hill in Dracut; elevation, 240 feet	Lowell.
Winter; pond in Winchester	Boston.
Winthrop; town in Suffolk County; area, 2 square miles	Boston Bay.
Winthrop; fort on Governors Island, in Boston Harbor	Boston.
Winthrop; pond in Holliston	Franklin.
Winthrop Head; cliff or headland on southeast coast of Winthrop	Boston Bay.
Wipple; station in Palmer, on Ware River branch of Boston and Albany R. R	Palmer.
Wire; village in Spencer	Worcester.
Witch; brook in Townsend, 2 miles long; tributary to Squannacook River	Groton.
Woburn; city in Middlesex County; area, 14 square miles ...	Boston. Lawrence.
Woburn; principal village in town of same name, on Woburn branch of Boston and Lowell R. R	Boston.

	Atlas sheets.
ket; island in Buzzards Bay, about 1 mile northwest of hon Island	Falmouth.
rook in Townsend	Groton.
ill in Southbridge; elevation, 700 feet	Granville.
wamp in Townsend	Groton.
ain; brook in Rehoboth	Providence.
; hill in Southboro	Marlboro.
on Heights; village in Quincy, on Old Colony R. R.	Boston.
brook in Middleboro, 1½ miles long, tributary to Tespa- Pond	Middleboro.
hill in Andover; elevation, 340 feet	Lawrence.
hill in Douglas and Webster; elevation, 939 feet	Webster.
pond in Ludlow	Palmer.
pond in Middleboro	Middleboro.
nd; village upon Long Point, Provincetown	Provincetown.
nd; light-house in Wood End in Provincetown	Provincetown.
idge; island in Merrimac	Newburyport.
ry; point on southern coast of Beverly, east of Beverly	Salem.
ry; station in western part of Essex, on Boston and e R. R	Salem.
uck; hill in North Andover; elevation, 320 feet	Lawrence.
f; mountain in central part of New Marlboro; altitude, feet	Sandisfield.
Holl; village in southwestern part of Falmouth	Falmouth.
lle; village in Hopkinton	Blackstone.
ille; village in town of Shirley	Groton.
er; city in Worcester County; area, 32 square miles	Worcester. Webster.
n; brook in Coleraine, 2 miles long, tributary to River	Greenfield.
End: head of land 80 feet high on southern side trance to Weir River on north coast of Hingham	Boston Bay.
gton; town in Hampshire County; area, 33 square	Chesterfield.
gton; brook in Agawam, 1 mile long	Springfield.
gton Center; village in central part of Worthington.	Chesterfield.
gton Corners; village in north central part of Worth- n	Chesterfield.
cove on west side of Monomoy Island	Chatham.
m; town in Norfolk County; area, 35 square miles	Franklin.
m; village in town of same name	Franklin.
brook in Billerica, 2 miles long, tributary to Shaw- River	Lawrence.
brook in northern part of Mount Washington	Sheffield.
ponds in Ashby	Fitchburg.
river tributary to Mill River in eastern part of Wil- burg	Northampton.
; hill in northern part of Manchester; elevation, 160	Salem.
; hill in northeast part of Braintree	Abington.
lake in central part of Lynn	Boston Bay.
village in central part of Lynn	Boston Bay.

Sheets.	Limits.			
	In latitude.		In longitude.	
	° ′	° ′	° ′	° ′
Sheffield	42 00	to 42 15	73 15	to 73 30
Sandisfield	42 00	42 15	73 00	73 15
Granville	42 00	42 15	72 30	73 00
Springfield	42 00	42 15	72 15	72 30
Palmer	42 00	42 15	72 00	72 15
Brookfield	42 00	42 15	71 45	72 00
Webster	42 00	42 15	71 30	71 45
Cornwall	41 45	42 00	73 15	73 30
Winsted	41 45	42 00	73 00	73 15
Granby	41 45	42 00	72 30	73 00
Hartford	41 45	42 00	72 15	72 30
Tolland	41 45	42 00	72 00	72 15
Woodstock	41 45	42 00	71 45	72 00
Putnam	41 45	42 00	71 30	71 45
Clove	41 30	41 45	73 30	73 45
New Milford	41 30	41 45	73 15	73 30
Waterbury	41 30	41 45	73 00	73 15
Meriden	41 30	41 45	72 30	73 00
Middletown	41 30	41 45	72 15	72 30
Gilead	41 30	41 45	72 00	72 15
Norwich	41 30	41 45	71 45	72 00
Moosup	41 30	41 45	71 30	71 45
Carmel	41 15	41 30	73 30	73 45
Danbury	41 15	41 30	73 15	73 30
Derby	41 15	41 30	73 00	73 15
New Haven	41 15	41 30	72 30	73 00
Guilford	41 15	41 30	72 15	72 30
Saybrook	41 15	41 30	72 15	72 30
New London	41 15	41 30	71 45	72 00
Stonington	41 15	41 30	71 30	71 45
Stamford	41 00	41 15	73 30	73 45
Norwalk	41 00	41 15	73 15	73 30
Bridgeport	41 00	41 15	73 00	73 15

The spelling of the names conforms to the decisions of the U. Board on Geographic Names.

Connecticut is one of the original 13 States; it ratified the Constit tion on January 9, 1788.

The boundary lines between Rhode Island on the one hand and Mass chusetts and Connecticut on the other are extremely irregular, havi originated with early colonial charters, and having been modified su sequently by conventions and agreements, so that it is impossible describe them in any other way than by representing them upon a m or by a detailed statement of courses and distances.

The total area of the State is 4,990 square miles. Of this area 1 square miles are water surface, consisting of bays, ponds, rivers, et which, deducted from the total area, leaves 4,845 square miles of land surface.

The State is divided into eight counties, with land areas as follows:

County.	Square miles.
Fairfield	675
Hartford	751
Litchfield	914
Middlesex	381
New Haven	638
New London	670
Tolland	407
Windham	554

A GEOGRAPHIC DICTIONARY OF CONNECTICUT.

	Names of sheets.
Abington; village in Pomfret	Woodstock.
Above All; hill in southwest part of Warren; elevation, 1,456 feet	New Milford.
Alewife; cove extending from Long Island Sound into southern coast of Waterford and New London	New London.
Alexander; pond in northwest part of Killingly	Putnam.
Allen; hill in eastern part of Brooklyn; elevation, 340 feet	Putnam.
Allen; hill in Pomfret	Woodstock.
Allison; pond in southern part of Killingworth	Guilford.
Allyn Point; village in western part of Ledyard, on Thames River; and on Norwich and Worcester R. R	New London.
Almyville; village in central part of Plainfield, on Moosup River; and on Providence division New York and New England R. R	Moosup.
Alworth; hill on northwest part of Brooklyn; elevation, 749 feet	Woodstock.
Amos; lake in eastern part of Preston	Moosup.
Andover; town in southern part of Tolland County; area, 13 square miles	Tolland. Gilead.
Andover; village in central part of Andover, on Hop River; and on Hop River branch New York and New England R. R	Gilead.
Andrew; pond in western part of Danbury	Carmel.
Andrew; hill in southwest part of Naugatuck; elevation, 700 feet	Derby.
Angusville; brook rising in southern part of North Stonington, flowing south into Stonington, and empties into Wequetequock	Stonington.
Ansonia; town in western part of New Haven County; area, 6 square miles	Derby.
Ansonia; borough and principal place of Ansonia, situated in central part of town, on Naugatuck River; and on Naugatuck division New York and New England R. R	Derby.
Archer; mountain in central part of Lyme; altitude, 368 feet	Saybrook.
Arnold; village in eastern part of Haddam, on Connecticut River; and on Connecticut Valley division New York, New Haven and Hartford R. R	Guilford.
Ash; brook rising in western part of Coventry, tributary to Skungamaug River	Tolland.
Ash; creek in southeast part of Fairfield, tributary to Rooster River.	Bridgeport.
Ashford; town in western part of Windham County; area, 23 square miles	Woodstock.
Ashford; village in town of same name	Woodstock.
Ashland; pond in northwest part of Griswold	Moosup.
Aspetuck; village in Easton	Norwalk.
Aspetuck; river rising in eastern part of Redding, flows south through Easton, and empties into Saugatuck River in northern part of Westport	Danbury. Norwalk.

	Names of sheets.
Assekonk; brook in southern part North Stonington, tributary to Shunock River	Stonington.
Assekonk; swamp in southern part North Stonington	Stonington.
Attawaugan; village in northwest part of Killingly, on Fivemile River	Putnam.
Atwoodville; village in Mansfield	Woodstock.
Auger; pond in western part of Thompson	Putnam.
Augerville; village in eastern part of Hamden	New Haven.
Avery; pond in southern part of Preston	Stonington.
Avery; point of land projecting from southwest coast of Groton into Long Island Sound	New London.
Avery; hill in northern part of Franklin; elevation, 540 feet	Norwich.
Avery; hill in northwest part of Ledyard; elevation, 320 feet	New London.
Avon; town in western part of Hartford County; area, 23 square miles.	Granby.
Avon; principal village in northeast part of town of same name, on New York, New Haven and Hartford R. R., Northampton division	Granby.
Ayer; hill in northeast part of Ledyard; elevation, 500 feet	Stonington.
Babcock; pond in southwest part of Colchester	Gilead.
Babes; hill in northern part of Salisbury; elevation, 1,000 feet	Sheffield.
Back; river in southwest part of Old Lyme, tributary to Connecticut River	Saybrook.
Back; river in southern part of Old Saybrook, flowing into Long Island Sound	Saybrook.
Back; brook in northern part of Portland, tributary to Connecticut River	Middletown.
Bailey; hill in northwest part of Groton; elevation, 241 feet	New London.
Bailey; pond in northeastern corner of Voluntown	Moosup.
Baileyville; village in central part of Middlefield, on Air Line division New York, New Haven and Hartford R. R.	Middletown.
Baker; hill in eastern part of Chatham; elevation, 680 feet	Gilead.
Baker; cove extending from Long Island Sound into southwest coast of Groton	New London.
Bakersville; village in southwest part of New Hartford	Winsted.
Bald; hill in central part of East Haddam	Saybrook.
Bald; hill in Union; elevation, 1,286 feet	Woodstock.
Bald; hill in central part of Kent; elevation, 1,300 feet	New Milford.
Bald; hill in northwest part of Coventry; elevation, 944 feet	Tolland.
Bald; mountain in eastern part of Somers; altitude, 1,120 feet	Tolland.
Bald Hill; village in Wilton	Norwalk.
Baldwin; village in western part of Milford, on Housatonic River, and on Naugatuck division New York, New Haven and Hartford R. R.	Bridgeport.
Baldwin; hill in southwest part of Ledyard, extending into Groton; elevation, 240 feet	New London.
Ball; brook in southern part of New Fairfield, tributary to Wood Creek	Danbury. Carmel.
Ball; brook in northern part of Salisbury, tributary to Moore Brook	Sheffield.
Ball; hill in western part of Mansfield; elevation, 652 feet	Tolland.
Ball; mountain in northwest part of Norfolk; altitude, 1,760 feet	Sandisfield.
Ball; pond in southwest part of New Fairfield	Carmel.
Ball Pond; village in southwest part of New Fairfield	Carmel.
Ballouville; village in northern part of Killingly, on Fivemile River	Putnam.
Ballwall; brook in central part of Easton, tributary to Aspetuck River.	Danbury.
Baltic; village in southern part of Sprague, on Shetucket River; also on Providence division New York and New England R. R.	Norwich.

DEPARTMENT OF THE INTERIOR

BULLETIN

OF THE

UNITED STATES GEOLOGICAL SURVEY

No. 117

WASHINGTON
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1894

UNITED STATES GEOLOGICAL SURVEY

J. W. POWELL, DIRECTOR

A GEOGRAPHIC DICTIONARY OF CONNECTICUT

BY

HENRY GANNETT

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
U. S. GEOLOGICAL SURVEY,
DIVISION OF GEOGRAPHY,
Washington, D. C., February 1, 1894.

SIR: I have the honor to transmit herewith for publication a geographic dictionary of Connecticut.

Very respectfully,

HENRY GANNETT,
Chief Topographer.

Hon. J. W. POWELL,
Director U. S. Geological Survey.

A GEOGRAPHIC DICTIONARY OF CONNECTICUT.

By Henry Gannett.

The Geographic Dictionary of Connecticut, which constitutes this lletin, is designed to aid in finding any geographic feature upon the las sheets of that State published by the U. S. Geological Survey. contains all the names given upon those sheets, and no other. nder each name is a brief statement of the character and locality of e feature, and opposite is the name of the atlas sheet or sheets upon hich it is to be found.

The atlas sheets upon which the State is represented are the result a survey made at the joint expense of the U. S. Geological Survey and e State of Connecticut. The scale upon which the sheets are published 1:62500; that is, a distance of 62,500 inches upon the ground, or very arly 1 mile, is represented by 1 inch upon the map. Relief, or the riation of elevation, is represented by contour lines or lines of equal vation above mean sea level, these contour lines being at vertical ervals of 20 feet; so that each contour indicates a level 20 feet higher an the one below it. Upon the map all water bodies, that is, bays, nds, rivers, etc., are represented in blue; the contour lines repre- nting the relief, together with the figures showing elevation; are inted in brown; and the lettering and all symbols of the works of n are printed in black.

The area of the State is represented upon 33 sheets, each sheet com- ising 15 minutes of latitude by 15 minutes of longitude. Each sheet, erefore, includes about 17½ miles from north to south, and about 13 iles from east to west. Of these sheets only 20 lie entirely or practi- lly within the State; the others include portions of the adjacent ates of Rhode Island, Massachusetts, and New York. The following a list of the sheets showing the names assigned to them and their nits in latitude and longitude:

Sheets.	Limits.					
	In latitude.			In longitude.		
	° ′		° ′	° ′		° ′
Sheffield	42 00	to	42 15	73 15	to	73 30
Sandisfield	42 00		42 15	73 00		73 15
Granville	42 00		42 15	72 30		73 00
Springfield	42 00		42 15	72 15		72 30
Palmer	42 00		42 15	72 00		72 15
Brookfield	42 00		42 15	71 45		72 00
Webster	42 00		42 15	71 30		71 45
Cornwall	41 45		42 00	73 15		73 30
Winsted	41 45		42 00	73 00		73 15
Granby	41 45		42 00	72 30		73 00
Hartford	41 45		42 00	72 15		72 30
Tolland	41 45		42 00	72 00		72 15
Woodstock	41 45		42 00	71 45		72 00
Putnam	41 45		42 00	71 30		71 45
Clove	41 30		41 45	73 30		73 45
New Milford	41 30		41 45	73 15		73 30
Waterbury	41 30		41 45	73 00		73 15
Meriden	41 30		41 45	72 30		73 00
Middletown	41 30		41 45	72 15		72 30
Gilead	41 30		41 45	72 00		72 15
Norwich	41 30		41 45	71 45		72 00
Moosup	41 30		41 45	71 30		71 45
Carmel	41 15		41 30	73 30		73 45
Danbury	41 15		41 30	73 15		73 30
Derby	41 15		41 30	73 00		73 15
New Haven	41 15		41 30	72 30		73 00
Guilford	41 15		41 30	72 15		72 30
Saybrook	41 15		41 30	72 15		72 30
New London	41 15		41 30	71 45		72 00
Stonington	41 15		41 30	71 30		71 45
Stamford	41 00		41 15	73 30		73 45
Norwalk	41 00		41 15	73 15		73 30
Bridgeport	41 00		41 15	73 00		73 15

The spelling of the names conforms to the decisions of the U. Board on Geographic Names.

Connecticut is one of the original 13 States; it ratified the Constit tion on January 9, 1788.

The boundary lines between Rhode Island on the one hand and Mass chusetts and Connecticut on the other are extremely irregular, havin originated with early colonial charters, and having been modified su sequently by conventions and agreements, so that it is impossible describe them in any other way than by representing them upon a ma or by a detailed statement of courses and distances.

The total area of the State is 4,990 square miles. Of this area 14 square miles are water surface, consisting of bays, ponds, rivers, et which, deducted from the total area, leaves 4,845 square miles of land surface.

The State is divided into eight counties, with land areas as follows:

County.	Square miles.
Fairfield	675
Hartford	751
Litchfield	914
Middlesex	381
New Haven	638
New London	670
Tolland	407
Windham	554

A GEOGRAPHIC DICTIONARY OF CONNECTICUT.

	Names of sheets.
Abington; village in Pomfret	Woodstock.
Above All; hill in southwest part of Warren; elevation, 1,456 feet	New Milford.
Alewife; cove extending from Long Island Sound into southern coast of Waterford and New London	New London.
Alexander; pond in northwest part of Killingly	Putnam.
Allen; hill in eastern part of Brooklyn; elevation, 340 feet	Putnam.
Allen; hill in Pomfret	Woodstock.
Allison; pond in southern part of Killingworth	Guilford.
Allyn Point; village in western part of Ledyard, on Thames River; and on Norwich and Worcester R. R.	New London.
Almyville; village in central part of Plainfield, on Moosup River; and on Providence division New York and New England R. R	Moosup.
Alworth; hill on northwest part of Brooklyn; elevation, 749 feet	Woodstock.
Amos; lake in eastern part of Preston	Moosup.
Andover; town in southern part of Tolland County; area, 13 square miles	Tolland. Gilead.
Andover; village in central part of Andover, on Hop River; and on Hop River branch New York and New England R. R	Gilead.
Andrew; pond in western part of Danbury	Carmel.
Andrew; hill in southwest part of Naugatuck; elevation, 700 feet	Derby.
Angusville; brook rising in southern part of North Stonington, flowing south into Stonington, and empties into Wequetequock	Stonington.
Ansonia; town in western part of New Haven County; area, 6 square miles	Derby.
Ansonia; borough and principal place of Ansonia, situated in central part of town, on Naugatuck River; and on Naugatuck division New York and New England R. R	Derby.
Archer; mountain in central part of Lyme; altitude, 368 feet	Saybrook.
Arnold; village in eastern part of Haddam, on Connecticut River; and on Connecticut Valley division New York, New Haven and Hartford R. R	Guilford.
Ash; brook rising in western part of Coventry, tributary to Skungamaug River	Tolland.
Ash; creek in southeast part of Fairfield, tributary to Rooster River.	Bridgeport.
Ashford; town in western part of Windham County; area, 23 square miles	Woodstock.
Ashford; village in town of same name	Woodstock.
Ashland; pond in northwest part of Griswold	Moosup.
Aspetuck; village in Easton	Norwalk.
Aspetuck; river rising *in eastern part of* Redding, flows south *through Easton, and empties into* Saugatuck River in northern *part of Westport*	Danbury. Norwalk.

	Names of sheets.
Assekonk; brook in southern part North Stonington, tributary to Shunock River	Stonington.
Assekonk; swamp in southern part North Stonington	Stonington.
Attawaugan; village in northwest part of Killingly, on Fivemile River	Putnam.
Atwoodville; village in Mansfield	Woodstock.
Auger; pond in western part of Thompson	Putnam.
Augerville; village in eastern part of Hamden	New Haven.
Avery; pond in southern part of Preston	Stonington.
Avery; point of land projecting from southwest coast of Groton into Long Island Sound	New London.
Avery; hill in northern part of Franklin; elevation, 540 feet	Norwich.
Avery; hill in northwest part of Ledyard; elevation, 320 feet	New London.
Avon; town in western part of Hartford County; area, 23 square miles.	Granby.
Avon; principal village in northeast part of town of same name, on New York, New Haven and Hartford R. R., Northampton division	Granby.
Ayer; hill in northeast part of Ledyard; elevation, 500 feet	Stonington.
Babcock; pond in southwest part of Colchester	Gilead.
Babes; hill in northern part of Salisbury; elevation, 1,000 feet	Sheffield.
Back; river in southwest part of Old Lyme, tributary to Connecticut River	Saybrook.
Back; river in southern part of Old Saybrook, flowing into Long Island Sound	Saybrook.
Back; brook in northern part of Portland, tributary to Connecticut River	Middletown.
Bailey; hill in northwest part of Groton; elevation, 241 feet	New London.
Bailey; pond in northeastern corner of Voluntown	Moosup.
Baileyville; village in central part of Middlefield, on Air Line division New York, New Haven and Hartford R. R.	Middletown.
Baker; hill in eastern part of Chatham; elevation, 680 feet	Gilead.
Baker; cove extending from Long Island Sound into southwest coast of Groton	New London.
Bakersville; village in southwest part of New Hartford	Winsted.
Bald; hill in central part of East Haddam	Saybrook.
Bald; hill in Union; elevation, 1,286 feet	Woodstock.
Bald; hill in central part of Kent; elevation, 1,300 feet	New Milford.
Bald; hill in northwest part of Coventry; elevation, 944 feet	Tolland.
Bald; mountain in eastern part of Somers; altitude, 1,120 feet	Tolland.
Bald Hill; village in Wilton	Norwalk.
Baldwin; village in western part of Milford, on Housatonic River, and on Naugatuck division New York, New Haven and Hartford R. R.	Bridgeport.
Baldwin; hill in southwest part of Ledyard, extending into Groton; elevation, 240 feet	New London.
Ball; brook in southern part of New Fairfield, tributary to Wood Creek	Danbury. Carmel.
Ball; brook in northern part of Salisbury, tributary to Moore Brook	Sheffield.
Ball; hill in western part of Mansfield; elevation, 652 feet	Tolland.
Ball; mountain in northwest part of Norfolk; altitude, 1,760 feet	Sandisfield.
Ball; pond in southwest part of New Fairfield	Carmel.
Ball Pond; village in southwest part of New Fairfield	Carmel.
Ballouville; village in northern part of Killingly, on Fivemile River	Putnam.
Ballwall; brook in central part of Easton, tributary to Aspetuck River.	Danbury.
Baltic; village in southern part of Sprague, on Shetucket River; also on Providence division New York and New England R. R.	Norwich.

	Names of sheets.
anksville; village in extreme northern part of Greenwich	Stamford.
Bantam; river rising in southern part of Goshen, flowing southwest through central part of Litchfield and northwest part of Morris, into Shepaug River in northern part of Washington	Waterbury.
Bantam; lake in northern part of Morris, extending into southern part of Litchfield	Waterbury.
Bantam Falls; village in western part of Litchfield on Bantam River and on Shepaug, Litchfield and Northern R. R	Waterbury.
Bare; hill in northwest part of Voluntown	Moosup.
Barkhamsted; town in northeast part of Litchfield County; area, 39 square miles.	Granby. Winsted.
Barkhamsted; village in eastern part of town of same name	Granby.
Barndoor; two hills in southern part of Granby; altitudes, 700 and 600 feet, respectively	Granby.
Barrack; mountain in southwest part of Canaan; altitude, 1,140	Cornwall.
Barses; pond in southeast part of New Fairfield	Danbury.
Bartlett; village in northeast part of Waterford	New London.
Bartlett Tower; hill in northeast part of Simsbury, extending into Bloomfield; elevation, 560 feet	Granby.
Bashan; lake in central part of East Haddam	Saybrook.
Bashon; hill in western part of Bozrah; elevation, 480 feet	Norwich.
Batoom; pond in southwest part of Norfolk	Winsted.
Bate; pond in southwest part of Canterbury	Norwich.
Battle Swamp; brook rising in southern part of Washington, flowing into Shepaug River in northwest part of Roxbury	New Milford.
Bay; mountain in southern part of Griswold; altitude 560 feet	Moosup.
Beach; pond in east central part of Voluntown, extending into Exeter, R. I	Moosup.
Beacon; hill in southwest part of East Haven; elevation, 160 feet	New Haven.
Beacon; hill in southwest part of Branford; elevation, 120 feet	New Haven.
Beacon; hill in northern part of Beacon Falls, and Bethany, extending into Naugatuck; has two peaks, elevation of one being 600 and of the other 700 feet	Derby.
Beacon Falls; town in western part of New Haven County; area, 10 square miles	Derby.
Beacon Falls; village in central part of town of same name on Naugatuck River, also, on Naugatuck division, New York, New Haven and Hartford R. R	Derby.
Beacon Hill; brook in south and east part of Naugatuck, tributary to Naugatuck River	Derby.
Bear; hill in northeast part of New Milford; elevation, 1,320 feet	New Milford.
Bear; hill in central part of Bozrah; elevation, 500 feet	Norwich.
Bear; hill in eastern part of Middletown; elevation, 650 feet	Middletown
Bear; mountain in northwest part of Salisbury; altitude, 2,355 feet.	Sheffield.
Beardsley; pond in northwest part of Sharon	Cornwall.
Beaslick; brook in southern part of Salisbury, flowing into Wononpakok Lake	Cornwall.
Beaslick; pond in southern part of Salisbury	Cornwall.
Beaver; brook rising in western part of Bethel, flowing north into Still River in eastern part of Danbury	Danbury.
Beaver; brook rising in northwest part of East Lyme, flowing west into Eight Mile River, in central part of Lyme	Saybrook.
Beaver; brook rising in southwest part of Hartland, flowing southeast through Barkhamsted into east branch of Farmington River.	Granby.
Beaver; brook, *right branch of Saugatuck River*, in Weston	Norwalk.

	Names of sheets.
Beaver; brook in Windham and Scotland	**Norwich.**
Beaver; brook rising in eastern part of Franklin, flowing into Shetucket River, in southern part of Sprague	**Norwich.**
Beaver; hill in northern part of New Haven; elevation, 100 feet	**New Haven.**
Beaverdam; brook in Eastford,, tributary to Natchaug River	**Woodstock.**
Bee; brook rising in southeast part of Warren, flowing south into Shepaug River, in northern part of Washington	**New Milford.**
Belcher; brook in eastern part of Berlin, tributary to Sebethe River	**Meriden.**
Beldon; hill in Wilton	**Norwalk.**
Belle; island off coast of Norwalk	**Norwalk.**
Benedict; pond in northeast part of Norfolk	**Sandisfield.**
Bennett; two small ponds in northern part of Ridgefield	**Danbury.**
Bennett Bridge; village in southern part of Southbury on Pomperaug and Housatonic Rivers	**Danbury.** **Derby.**
Berkshire; village in eastern part of Newtown	**Danbury.**
Berkshire Mill; pond in west central part of Bridgeport	**Bridgeport.**
Berlin; town in southwest part of Hartford County; area, 28 square miles.	**Meriden.** **Middletown.**
Berlin; village in northern part of town of same name on New York and New England R. R. also on New York, New Haven and Hartford R. R	**Middletown.** **Meriden.**
Beseck; mountain in western part of Middlefield and extending in eastern part of Wattingford, greatest elevation being 840 feet	**Guilford.** **Middletown.**
Beseck; lake in southwest part of Middlefield	**Middletown.**
Bethany; town in western part of New Haven County; area, 21 square miles.	**Derby.** **New Haven.**
Bethany; village in central part of town of same name	**New Haven.**
Bethel; town in northern part of Fairfield County; area, 16 square miles	**Danbury.**
Bethel; borough in town of same name situated in western part of town on Danbury and Norwalk division, Housatonic R. R	**Danbury.**
Bethlehem; town in southern part of Litchfield County; area, 19 square miles.	**New Milford.** **Waterbury.**
Bethlehem; village in central part of town of same name	**Waterbury.**
Bett; island near the Norwalk islands off mouth of Norwalk River and Long Island Sound	**Norwalk.**
Big Meadow, pond in northwest part of Watertown	**Waterbury.**
Bigelow; brook rising in Union, forming northwestern boundary line between Ashford and Eastford and thence flowing into Natchaug River	**Woodstock.**
Bill Hill; village in southwest part of Lyme	**Saybrook.**
Billings; lake in northern part of North Stonington	**Moosup.**
Bingham; pond in northwest part of Salisbury	**Sheffield.**
Birge; pond in central part of Bristol	**Meriden.**
Birmingham; borough in central part of Derby at junction of Naugatuck and Housatonic rivers; also on Naugatuck division, New York, New Haven and Hartford R. R., and New Haven and Derby R. R	**Derby.**
Bissel; ferry in eastern part of Windsor	**Hartford.**
Black; brook in northwest part of Woodbridge, tributary to Bladens River	**Derby.**
Black; pond in Woodstock	**Woodstock.**
Black; pond on boundary line between Meriden and Middlefield	**Middletown.**
Black Point; village on extreme southern point of East Lyme, on *Long Island Sound*	**New London.**

	Names of sheets.
Black Rock; village in southwest part of Bridgeport on Long Island Sound	Bridgeport.
Black Rock; harbor; arm of Long Island Sound, indenting southwest coast of Bridgeport	Bridgeport.
Blackhall; pond in northeast part of Old Lyme	Saybrook.
Blackhall; village in southwest part of Old Lyme, on Shore Line division New York, New Haven and Hartford R. R	Saybrook.
Blackhall; river rising in northeast part of Old Lyme, flowing southwest into Long Island Sound	Saybrook.
Blackberry; river rising in Norfolk, flowing west into Housatonic River in west central part of North Canaan	Sheffield.
Blackstone Rocks; group of islands off southern coast of Branford, in Long Island Sound	New Haven.
Blackwell; brook rising in southern part of Pomfret, flowing southeast into Quinebaug River in northeast part of Canterbury	Putnam.
Bladen; river rising in North Woodbridge, flowing west into Naugatuck River, in central part of Seymour	Derby.
Blake; hill in western part of Windham; elevation, 500 feet	Norwich.
Blakely; pond in eastern part of Norfolk	Winsted.
Blockledge; river rising in Bolton, flowing south through Hebron and Marlboro into Salmon River in western part of Colchester	Gilead.
Bloomfield; town in central part of Hartford County; area, 28 square miles.	Granby. Hartford.
Bloomfield; village in eastern part of town of same name on Central New England and Western R. R	Hartford.
Blue; hill in Franklin and Bozrah; elevation, 500 feet	Norwich.
Bluff; point of land projecting from southern coast of Groton into Long Island Sound	New London.
Bluff Head; hill in northern part of Guilford; elevation, 765 feet	Guilford.
Boardman Bridge; village in western part of New Milford, on Housatonic River, also on Housatonic R. R	New Milford.
Bog Meadow; pond in central part of Sharon	Cornwall.
Boggs; pond in northwest part of Danbury	Carmel.
Bolton; town in western part of Tolland County; area, 19 square miles.	Tolland. Gilead.
Bolton; village in central part of town of same name	Tolland.
Bolton Notch; village in northern part of Bolton	Tolland.
Booth; hill in northeast part of Trumbull and in Huntington; elevation, 530 feet	Derby.
Botsford; village in southeast part of Newtown, on Housatonic R. R	Danbury.
Bower: hill in southwest part of Oxford, having two peaks, the altitude of one being 400 feet and that of the other 440 feet	Derby.
Box; mountain in northwest part of Bolton and in Vernon; altitude, 870 feet	Tolland.
Boyle; brook in northern part of East Hartford, tributary to Connecticut River	Hartford.
Boys Halfway; river rising in eastern Monroe, flowing north into Housatonic River	Derby.
Bozrah; town in western part of New London County; area, 20 square miles	Norwich.
Bozrah Street; village in central part of Bozrah	Norwich.
Bozrahville; village in northwest part of Bozrah, on Yantic River	Norwich.
Bradford; mountain in northeast part of Canaan; altitude, 1,927 feet	Cornwall.
Branchville; village in southeast part of Ridgefield, on Norwalk River; also on *Housatonic R. R*	Danbury.

	Names of sheets.
Brandy; hill in western part of Torrington; elevation, 1,160 feet	Winsted.
Branford; town in southern part of New Haven County; area, 23 square miles.	New Haven. Guilford.
Branford; village in central part of town of same name, on Branford River, also on Shore Line division New York, New Haven and Hartford R. R	New Haven.
Branford; point projecting from southwest coast of Branford into Branford Harbor	New Haven.
Branford; river rising in western part of Guilford, flowing southwest through North Branford and Branford, into Long Island Sound	New Haven.
Branford; harbor, arm of Long Island Sound, indenting southern coast of Branford	New Haven.
Breakneck; hill in northern part of Middlebury; elevation, 829 feet.	Waterbury.
Breakneck; hill in north central part of Killingly; elevation, 640 feet	Putnam.
Breakneck; pond in northeast part of Union	Brookfield.
Brewster; pond in western part of Lebanon	Gilead.
Bride; lake in southwest part of East Lyme	New London.
Bride Lake; brook in southwest part of East Lyme, flowing into Long Island Sound	New London.
Bridgeport; town in southeast part of Fairfield County; area, 9 square miles	Bridgeport.
Bridgewater; town in southern part of Litchfield County; area, 15 square miles.	New Milford. Danbury.
Bridgewater; village in central part of town of same name	New Milford.
Briggs; hill in southern part of Sherman; elevation, 1,060 feet	New Milford.
Brightview; village in southwest part of East Haven	New Haven.
Bristol; town in southwestern part of Hartford County; area, 27 square miles	Meriden.
Bristol; principal village of town of same name on Pequobuck River; also on New York and New England R. R	Meriden.
Broad; brook rising in northern part of North Stonington, flowing northwest into Quinebaug River in northern part of Preston	Moosup.
Broad; brook rising in eastern part of Ellington, flowing west into Scantic River, in central part of East Windsor.	Tolland. Hartford.
Broad Brook; village in northeast part of Windsor	Hartford.
Brockaway; island off western coast of Lyme in Connecticut River.	Saybrook.
Bromica; mountain in eastern part of Kent; altitude, 1,380 feet	New Milford.
Brookfield; town in northern part of Fairfield County; area, 21 square miles.	Danbury. New Milford.
Brookfield; village in western part of town of same name on Still River; also on Housatonic R. R	Danbury.
Brookfield Center; village in central part of Brookfield	Danbury.
Brookfield Junction; village in southern part of Brookfield on Housatonic R. R	Danbury.
Brooklyn; town in central part of Windham County; area, 30 square miles.	Woodstock. Putnam.
Brooklyn; principal village in central part of town of same name	Putnam.
Brooks Vale; village in southwest part of Cheshire, on Northampton division New York, New Haven and Hartford R. R	New Haven.
Brown; point projecting from southern coast of Branford into Long Island Sound	New Haven.
Brown; brook, right branch of Mill River, in Fairfield	Norwalk.
Buck; hill in northeastern part of Suffield; elevation, 260 feet	Springfield.

	Names of sheets.
Buckland; village in northwest part of Manchester on New York and New England R. R.	Hartford.
Buckwheat; hill in southern part of Meriden; elevation, 465 feet.	Meriden.
Budington; pond in central part of Groton	New London.
Bulkley; hill in southern part of Colchester; elevation, 520 feet.	Gilead.
Bull; mountain in southern part of Kent; altitude, 1,140 feet	New Milford.
Bungee; brook in Woodstock, tributary to Still River, flowing into Black Pond	Woodstock.
Bungee; hill in Woodstock; elevation, 870 feet	Woodstock.
Bunker; hill in northwest part of Killingworth; elevation, 510 feet.	Guilford.
Bunnell; pond in northern part of Bridgeport	Bridgeport.
Burlington; town in western part of Hartford County; area, 30 square miles.	Winsted. Waterbury. Granby. Meriden.
Burlington; village in central part of town of same name.	Granby.
Burlington; brook rising in central part of Burlington, tributary to Farmington River	Granby.
Burlington Station; village in western part of Avon, on Farmington River; also on New York, New Haven and Hartford R. R.	Granby.
Burnett Corner; village in northeast part of Groton	Stonington.
Burnham; village in northern part of East Hartford, on New York and New England R. R., Springfield division	Hartford.
Burnside; village in central part of East Hartford, on Hockanum River	Hartford.
Burnt; hill in eastern part of Farmington; elevation, 420 feet.	Meriden.
Burrville; village in northeast part of Torrington, on Still River; also, on New York, New Haven and Hartford R. R., Naugatuck division	Winsted.
Burton; brook in western part of Salisbury, tributary to Salmon Creek	Cornwall.
Bushnell; mountain in northwest part of Washington; altitude, 1,080 feet.	New Milford.
Bushy; point projecting from southwest coast of Groton into Long Island Sound	New London.
Bushy; two hills in southern part of Granby; elevations, 500 and 480 feet, respectively	Granby.
Butternut; brook in western part of Litchfield tributary to Bantam River	Waterbury.
Byram; river heading in New York, and flowing south through western part of Greenwich into Long Island Sound	Stamford.
Byron; brook in northern part of Norwich, tributary to Shetucket River	Norwich.
Calfpasture; island in Long Island Sound, forming part of Norwalk.	Norwalk.
Calfpasture; point south of mouth of Norwalk River, in Norwalk	Norwalk.
Calves; island off northwest coast of Old Lyme in Connecticut River.	Saybrook.
Camp Meeting; village in western part of Windham	Norwich.
Campville; village in southwest part of Harwinton on Naugatuck River, and on New York, New Haven and Hartford R. R.	Waterbury.
Canaan; town in northwest part of Litchfield County; area, 33 square miles.	Cornwall. Winsted. Sheffield.
Canaan; principal village in western part of North Canaan on Connecticut Western, and Housatonic R. Rs	Sheffield.

	Names of sheets.
Canaan; mountain in Canaan and North Canaan; highest summit being Mount Bradford, 1,927 feet	Cornwall. Sheffield.
Canaan Valley; village in northeast part of North Canaan on Whiting River	Sheffield.
Candlewood; range of mountains extending in western part of New Milford and eastern part of Sherman; greatest elevation, 1,000 feet	New Milford.
Candlewood; hill in northwest part of Haddam; elevation, 480 feet.	Guilford.
Candlewood Hill; brook in western part of Haddam, flowing northeast into Connecticut River in northern part of Haddam	Guilford.
Cannon; village in Wilton on Norwalk River	Norwalk.
Canterbury; town in southern part of Windham County; area, 40 square miles.	Woodstock. Putnam. Norwich. Moosup.
Canterbury; village in east central part of town of same name on Quinebaug River	Moosup.
Canton; town in western part of Hartford County; area, 30 square miles	Granby.
Canton; village in southeast part of town of same name, on Central New England and Western R.R	Granby.
Canton Center; village in southwest part of town of same name	Granby.
Carmel; mountain in northeast part of Hamden; altitude, 737 feet	New Haven.
Carrington; hill in northeast part of Woodbridge; elevation, 420 feet	New Haven.
Cat Hole; mountain in northwest part of Meriden; altitude, 460 feet	Meriden.
Cat Hole; brook in western part of Meriden, tributary to Sodom Brook	Meriden.
Cedar; mountain in Newington and Wethersfield; greatest altitude, 340 feet	Middletown.
Cedar; point projecting into Long Island Sound from Westport	Norwalk.
Cedar; pond in northeast part of Lyme	Saybrook.
Cedar; lake in central part of Chester	Saybrook.
Cedar; swamp in northeast part of Ledyard	Stonington.
Cedar; swamp in southeast part of North Stonington	Stonington.
Cedar; swamp in south central part of Chester	Saybrook.
Cedar Swamp; brook in central part of Sterling, tributary to Moosup River	Moosup.
Cedar Swamp; pond in southern part of Lebanon	Norwich.
Center Brook Station; village in east central part of Essex, on Connecticut Valley division, New York, New Haven and Hartford R. R.	Saybrook.
Center Groton; village in north central part of Groton	New London.
Centerville; village in east central part of Hamden	New Haven.
Centerville Station; village in east central part of Hamden, on Northampton division New York, New Haven and Hartford R. R.	New Haven.
Central; village in west central part of Plainfield, on Moosup River; also on Norwich and Worcester division New York and New England R. R	Moosup.
Chaffeeville; village in Mansfield	Woodstock.
Chapinville; village in north central part of Salisbury	Sheffield.
Chapinville Station; village in north central part of Salisbury, on Connecticut Western R. R	Sheffield.
Chaplin; town in western part of Windham County; area, 20 square *miles.*	Norwich. Woodstock.

	Names of sheets.
Chaplin; village in town of same name	Woodstock.
Chaplin Station; village in southwest part of Hampton, and on New York and New England R. R.	Woodstock.
Chapman; point projecting from southeast coast of Saybrook into Long Island Sound	Saybrook.
Chapman; hill in north central part of North Stonington; elevation, 520 feet	Stonington.
Chapman; pond in southwest part of East Haddam	Saybrook.
Charles; island off southern coast of Milford in Long Island Sound	Bridgeport.
Chatham; town in northeast part of Middlesex County; area, 37 square miles.	Middletown. Gilead.
Cherry; hill in western part of Branford; elevation, 166 feet	New Haven.
Cherry; hill in southern part of Hamden; elevation, 220 feet	New Haven.
Cherry; hill in eastern part of Middlefield; elevation, 300 feet	Middletown.
Cherry; brook rising in southwest part of Granby, flowing southwest through Canton into Farmington	Granby.
Cherry Brook; village in southwest part of Canton on Farmington River and on Central New England and Western R. R.	Granby.
Cheshire; town in northern part of New Haven County; area, 38 square miles.	Meriden. New Haven.
Cheshire; principal village in central part of town of same name	Meriden. New Haven.
Cheshire Street; village in eastern part of Cheshire on Meriden and Waterbury R. R.	Meriden.
Chester; town in eastern part of Middlesex County; area, 11 square miles.	Guilford. Saybrook.
Chester; principal village in eastern part of town of same name	Saybrook.
Chesterfield; village in southwest part of Montville	New London.
Chester Station; village in eastern part of Chester on Connecticut River, also on Connecticut Valley division New York, New Haven and Hartford R. R.	Saybrook.
Chestnut; hill in Wilton	Norwalk.
Chestnut; hill in northeast part of Killingly; elevation, 740 feet	Putnam.
Chestnut; hill in western part of Chatham; elevation, 500 feet	Middletown.
Chestnut; hill in northern part of Lebanon; elevation, 540 square miles	Gilead.
Chestnut; hill in southern part of Killingworth; elevation, 348 feet	Guilford.
Chestnut; hill in eastern part of Oxford; elevation, 631 feet	Derby.
Chestnut; hill in central part of Litchfield; elevation, 1,160 feet	Waterbury.
Chestnut; mountain in southern part of Middletown; altitude, 620 feet	Middletown.
Chestnut Hill; village in eastern part of Killingly	Putnam.
Chestnut Hill; village in eastern part of Columbia, on New York, New Haven and Hartford R. R., Air Line division	Gilead.
Chimon; island off mouth of Norwalk River in Long Island Sound	Norwalk.
Choate; brook in Preston, tributary to Quinebaug River	Norwich.
Church; hill in western part of North Canaan; elevation, 940 feet	Sheffield.
Clam; island off southwest coast of Branford, in Long Island Sound	New Haven.
Clapboard; hill in southeast part of Guilford; elevation, 108 feet	Guilford.
Clapboard; brook in northwest part of Bridgewater, tributary to Housatonic River	New Milford.
Clark; cove extending from Thames River into west coast of Ledyard	New London.
Clark Corner; village in southwest part of Hampton	Woodstock.
Clark Falls; village in east central part of North Stonington, on Green Fall River	Stonington.

	Names of sheets.
Clayton; village in northern part of North Canaan on Konkapot River.	Sheffield.
Clayville; village in northwest part of Griswold, on Norwich and Worcester division New York and New England R. R.	Moosup.
Clayville; pond in northwest part of Griswold	Moosup.
Clear; brook in northern part of Burlington, tributary to Phelps Brook	Granby.
Clinton; town in southwest part of Middlesex County; area, 14 square miles.	Guilford. Saybrook.
Clinton; principal village in town of same name, also on Air Line division, New York, New Haven and Hartford R. R.	Guilford.
Clintonville; village in northeast part of North Haven	New Haven.
Coatney; hill in Woodstock; elevation, 936 feet	Woodstock.
Cobalt; village in western part of Chatham, on Air Line division New York, New Haven and Hartford R. R	Middletown.
Cobble; hill in western part of Kent; elevation, 940 feet	New Milford.
Cockenoe; island in Long Island Sound, off mouth of Saugatuck River	Norwalk.
Coe; hill in northern part of Middlefield; elevation, 500 feet	Middletown.
Coginchaug; river rising in northeast part of Guilford, flowing through Middlefield and Middletown, into Sebethe River	Guilford.
Colchester; town in northwest part of New London County; area, 50 square miles.	Gilead. Norwich.
Colchester; borough in central part of town of same name, reached by branch of New York, New Haven and Hartford R. R., Air Line division	Gilead.
Cold; brook in northern part of Norwich, tributary to Shetucket River	Norwich.
Cold; brook in southern part of Glastonbury, tributary to Roaring Brook	Middletown.
Cold Spring; village in southeast part of Newtown, on Housatonic R. R	Danbury.
Colebrook; town in northeast part of Litchfield County; area, 34 square miles.	Sandisfield. Winsted.
Colebrook; village in central part of town of same name	Winsted.
Colebrook River; village in northeast part of Colebrook, on Farmington River	Sandisfield.
Colebrook Station; village in northwest part of Winchester, on Mad River, also on Central New England and Western R. R	Winsted.
Collamer; village in extreme southern part of Sterling	Moosup.
Collins; hill in central part of Portland; elevation, 340 feet	Middletown.
Collinsville; principal village in southwest corner of Canton on Farmington River, and also on New York, New Haven and Hartford R. R	Granby.
Columbia; town in southern part of Tolland County; area, 22 square miles.	Gilead. Norwich.
Columbia; village in central part of town of same name	Gilead.
Compo; hill near coast in Westport	Norwalk.
Compounce; pond in northwest part of Southington	Meriden.
Congamuck; ponds forming boundary between Southwick, Mass., and Suffield, Conn	Granville.
Connecticut; river heading in Canada and northern New Hampshire; forms boundary between New Hampshire and Vermont, and flows southeast across Massachusetts and Connecticut into Long Island Sound.	Springfield. Hartford. Middletown. Guilford. Saybrook.

	Names of sheets.
Connecticut River; village in eastern part of Old Saybrook, on Connecticut River, also on Shore Line division New York, New Haven and Hartford R. R	Saybrook.
Converse; hill in southern part of Stafford; elevation, 813 feet	Tolland.
Cook; pond in southern part of Preston	Stonington.
Copp; island off mouth of Norwalk River, in Long Island Sound	Norwalk.
Copp; brook in Stonington	Stonington.
Cornfield; point projecting from southern coast Old Saybrook into Long Island Sound	Saybrook.
Cornwall; town in western part of Litchfield County; area, 47 square miles	Cornwall.
Cornwall; village in town of same name	Cornwall.
Cornwall Bridge; village in southwest part of Cornwall, on Housatonic River, and on Housatonic R. R	Cornwall.
Cornwall Center; village in central part of Cornwall	Cornwall.
Cornwall Hollow; village in northeast part of Cornwall	Cornwall.
Corum; hill in eastern part of Huntington; elevation, 400 feet	Derby.
Coscob; village in southern part of Greenwich, on Coscob Harbor, and on New York, New Haven and Hartford R. R	Stamford.
Coscob; harbor, arm of Long Island Sound indenting southern coast of Greenwich	Stamford.
Cossaduck; hill in west central part of North Stonington; it has three peaks, the altitudes being 420, 420, and 460 feet, respectively.	Stonington.
Cove; river in eastern part of Orange, flowing into Long Island Sound.	New Haven.
Cove, The; pond in northeastern part of Wethersfield	Middletown.
Coventry; town in southern part of Tolland County; area, 38 square miles.	Tolland. Gilead.
Coventry; village in northwest part of town of same name	Tolland.
Cranberry; pond in southern part of Litchfield	Waterbury.
Cranberry; hill in western part of Madison; elevation, 400 feet	Guilford.
Crane Bar; island off western coast of East Haven in New Haven Harbor	New Haven.
Cream; hill in northern part of Cornwall; elevation, 1,503 feet	Cornwall.
Cream Hill; pond in northern part of Cornwall	Cornwall.
Creek; pond in southern part of Sherman	New Milford.
Crescent; beach on southeast coast of East Lyme, extending into Long Island Sound	New London.
Crescent; pond in northeast part of Southington	Meriden.
Cricker; brook, right-hand branch of Mill River, in Easton and Fairfield	Norwalk.
Cromwell; town in northern part of Middlesex County; area, 13 square miles	Middletown.
Cromwell; principal village in southeast part of town of same name, on Connecticut River	Middletown.
Crow Hollow; brook rising in western part of Middletown, tributary to Harbor Brook	Meriden.
Crystal; pond on boundary line between Eastford and Woodstock	Woodstock.
Danbury; town in northwest part of Fairfield County; area, 45 square miles.	Carmel. Danbury.
Danbury; principal place in central part of town of same name, on Still River	Danbury.
Danielsonville; borough in Brooklyn and Killingly, at junction of Five Mile River with Quinebaug River; also on Norwich and Worcester division New York and New England R. R	Putnam.

	Names of sheets.
Darien; town in southwest part of Fairfield County; area, 14 square miles.	Stamford. Norwalk.
Darien; village in town of same name	Norwalk.
Darrow Rocks; islands off southwest coast of Branford, in Long Island Sound	New Haven.
Day; hill in central part of Windsor; elevation, 220 feet	Hartford.
Daytonville; village in southern part of Torrington, on east branch of Naugatuck River; also on New York, New Haven and Hartford R. R., Naugatuck division	Winsted.
Dayville; village in northwest part of Killingly, on west bank Five Mile River, opposite Killingly; also on Norwich and Worcester division, New York and New England R. R	Putnam.
Deadman; brook; left branch of Saugatuck River, in Westport	Norwalk.
Deep; brook, rises in western part of Newtown and flows northeast into Pootatuck River	Danbury.
Deep; river in southeast part of Colchester, tributary to Yantic River.	Gilead.
Deep River; cove; arm of Connecticut River indenting coast between Chester and Saybrook	Saybrook.
Deep River; principal village in northeast part of Saybrook, on Connecticut River; also on Connecticut Valley division, New York, New Haven and Hartford R. R	Saybrook.
Deep River Station; village in northeast part of Saybrook, on Connecticut River; also on Connecticut Valley division, New York, New Haven and Hartford R. R.	Saybrook
Derby; town in western part of New Haven County; area, 6 square miles	Derby.
Derby; village in southern part of town of same name, at junction of Naugatuck and Housatonic rivers; also on Naugatuck division, New York, New Haven and Hartford R. R. and New Haven and Derby R. R.	Derby.
Diamond; lake in eastern part of Glastonbury	Gilead.
Dickinson; creek rising in eastern part of Glastonbury, flowing south through Marlboro into Salmon River, in Colchester	Gilead.
Dismal; brook in Southwick, Mass., and Granby	Cranville.
Doaneville; village in east central part of Griswold and in Voluntown, on Pachaug River	Moosup.
Dodge; island off southwest coast of Stonington, in Long Island Sound	Stonington.
Dodge; pond in southeast part of East Lyme	New London.
Dodgington; village in west part of Newtown	Danbury.
Dog; pond in southern part of Goshen	Winsted.
Dooley; pond in southwest part of Middletown	Middletown.
Doolittle; pond in northeast part of Norfolk	Sandisfield.
Duck; river in western part of Old Lyme, tributary to Connecticut River	Saybrook.
Durfy; hill in southwest part of Waterford; elevation, 120 feet	New London.
Durham; town in western part of Middlesex County; area, 26 square miles	Guilford.
Durham; principal village in north central part of town of same name	Guilford.
Durham Center; village in central part of Durham	Guilford.
Durham Meadows; swamp in central part of Durham, on both sides Coginchaug River	Guilford.
Dutton; *mountain* in central part of Norfolk; altitude, 1,620 feet	Winsted.

	Names of sheets.
Eagleville; village in western part of Marshfield, on Willimantic River and on New London Northern R. R	Tolland.
East; hill in northern part of Southbury; elevation, 660 feet	Derby.
East; river rising in northeast part of Guilford, flowing south into Guilford Harbor, Long Island Sound	Guilford.
East Aspetuck; river rising in southern part of Warren, flowing southwest through Washington into Housatonic, in central part of New Milford	New Milford.
East Berlin; village in southeast part of Berlin	Middletown.
East Branch; river in Ashford, tributary to Mount Hope River	Woodstock.
East Branch; river rising in Salem, flowing southwest into Eightmile River, in northern part of Lyme	Saybrook.
East Branch Naugatuck; river rising in southeast part of Norfolk, flowing south through Winchester into Naugatuck River, in extreme southern part of Torrington	Winsted.
East Branch Salmon; brook rising in northeast part of Hartland, flowing southeast into Salmon Brook, in southeast part of Granby	Granville.
East Bridgeport; part of Bridgeport on Pequonnock River and on New York, New Haven and Hartford R. R	Bridgeport.
East Bromica; hill in western part of Kent; elevation, 1,320 feet	New Milford.
East Canaan; village in south central part of North Canaan, on Blackberry River; also on Connecticut Western R. R	Sheffield.
East Cornwall; village in southeast part of Cornwall	Cornwall.
East Glastonbury; village in central part of Glastonbury	Middletown.
East Granby; town in northern part of Hartford County; area, 18 square miles.	Granby. Hartford.
East Granby; village in town of same name	Hartford.
East Great; plain in southern part of Norwich	Norwich.
East Haddam; town in eastern part of Middlesex County; area, 48 square miles.	Gilead. Saybrook.
East Haddam; village in western part of town of same name, on Connecticut River	Saybrook.
East Hampton; village in central part of Chatham	Middletown.
East Hartford; town in eastern part of Hartford County; area, 18 square miles.	Hartford. Middletown.
East Hartford; principal village in northwest part of town of same name, on New York and New England R. R., Springfield division	Hartford.
East Hartland; village in eastern part of Hartland	Granby.
East Haven; town in southern part of New Haven County; area, 19 square miles	New Haven.
East Haven; village in southeast part of town of same name, on Farm River	New Haven.
East Kent; village in east central part of Kent	New Milford.
East Killingly; village in eastern part of Killingly, on Whitestone Brook	Putnam.
East; lake in northern part of Danbury	Danbury.
East Litchfield; village in eastern part of Litchfield, on Naugatuck River; also on New York, New Haven and Hartford R. R., Naugatuck division	Winsted.
East Lyme; town in southwest part of New London County; area, 19 square miles.	Saybrook. New London.
East Lyme; village in eastern part of town of same name, on Niantic River	New London.
East Meadow; brook rising in extreme southern part of Bethlehem, flowing south *into Nonewaug River*, in central part of Woodbury	Waterbury.

	Names of sheets.
East Meriden; village in eastern part of Meriden	**Meriden.**
East Morris; village in eastern part of Morris	**Waterbury.**
East Mountain; range of mountains in southeastern part of Kent; greatest elevation being 1,320 feet	**New Milford.**
East Norwalk; village in Norwalk, near mouth of Norwalk River and on New York, New Haven and Hartford R. R	**Norwalk.**
East Plymouth; village in northeast part of Plymouth	**Meriden.**
East Port Chester; village in southwest part of Greenwich, on Byron River	**Stamford.**
East Putnam; village in southern part of Putnam	**Putnam.**
East River; village in southern part of Madison and station on Shore Line division New York, New Haven and Hartford R. R	**Guilford.**
East Rock; hill in northeast part of New Haven; elevation, 359 feet.	**New Haven.**
East Thompson; village in northeast part of Thompson, on New York and New England R. R.; also on Southbridge branch of same road.	**Webster.**
East Village; village in northeast part of Monroe	**Derby.**
East Wallingford; village in southeast part of Wallingford, on Air Line division New York, New Haven and Hartford R. R	**New Haven.**
East Willington; village in Willington	**Woodstock.**
East Windsor; town in eastern part of Hartford County; area, 27 square miles	**Hartford.**
East Windsor Hill; village in northwest part of South Windsor	**Hartford.**
East Winsted; village directly east of Winsted on Still River, in eastern part of Winchester	**Winsted.**
East Woodstock; village in northeast part of Woodstock, on Muddy Brook	**Putnam.**
Easter; hill in Pomfret; elevation, 720 feet	**Woodstock.**
Eastern; point projecting from southwest coast of Groton into Long Island Sound	**New London.**
Eastford; town in western part of Windham County; area, 27 square miles	**Woodstock.**
Eastford; village in town of same name	**Woodstock.**
Easton; town in southern part of Fairfield County; area 29 square miles.	**Danbury.** **Norwalk.** **Bridgeport.**
Easton; village in central part of town of same name	**Norwalk.** **Danbury.**
Eightmile; brook rising in southeast part of Woodbury; flows south into Housatonic River, in southern part of Oxford	**Derby.**
Eightmile; brook rising in southeast part of Woodbury; flowing south it forms boundary between Southbury, Middlebury, and Oxford, and empties into the Housatonic in southern part of Oxford.	**Waterbury.**
Eightmile; river rising in extreme northwest corner of Southington, flowing in a southeasterly direction into Quinnipiac River, in southern part of Southington	**Meriden.**
Eightmile; river rising in eastern part East Haddam, flowing southwest into Connecticut River in western part Lyme	**Saybrook.**
Eightmile River; cove, arm of Connecticut River indenting western coast of Lyme; is also the mouth of Eight Mile River	**Saybrook.**
Elias; point projecting from southern coast of Greenwich into Greenwich Cove	**Stamford.**
Elihus; island off southern coast of Stonington, in Little Narragansett Bay	**Stonington.**
Ellington; town in northwest part of Tolland County; area, 36 *square miles.*	**Hartford.** **Tolland.**

	Names of sheets.
Ellington; village in west central part of town of same name, on Springfield division New York and New England R. R.	Tolland.
Elliott; village in Pomfret	Woodstock.
Ellithorpe; village in central part of Stafford	Tolland.
Ellsworth; village in central part of Sharon	Cornwall.
Ellsworth; hill in southern part of Sharon; elevation, 1,580 feet	Cornwall.
Elys Wharf; village in western part of Lyme, on Connecticut River.	Saybrook.
Enfield; town in northeast part of Hartford County; area, 35 square miles.	Springfield. Hartford.
Enfield; village in western part of town of same name	Hartford.
Essex; town in southeast part of Middlesex County; area, 13 square miles	Saybrook.
Essex; principal village in east central part of town of same name, on Connecticut River; also, on Connecticut Valley division New York, New Haven and Hartford R. R.	Saybrook.
Eureka Lake; pond in southern part of Danbury	Danbury.
Fairfield; town in southern part of Fairfield County; area, 51 square miles.	Norwalk. Bridgeport.
Fairfield; village in town of same name	Norwalk.
Fairfield; beach off southern coast of Fairfield, facing Long Island Sound	Bridgeport.
Fair Grounds; in western part of Danbury	Danbury.
Fair Haven East; borough in eastern part of New Haven, just east of New Haven City, on the New York, New Haven and Hartford R. R	New Haven.
Fair Oaks; village in central part of Montville	New London.
Fairy; lake in southeast part of Salem	New London.
Falls; village in western part of Canaan, on Housatonic River; also, on Housatonic R. R.	Cornwall.
Falls; river rising in western part of Saybrook, flowing south into Westbrook, thence east through Essex into Connecticut River	Saybrook.
Falls; mountain in southern part of New Milford	New Milford.
Falls; brook rising in northwest part of Warren, flowing into the Housatonic in northeast part of Kent	Cornwall.
Falls; brook in southeast part of Wolcott, tributary to Tenmile River	Meriden.
Falls River; cove, arm of Connecticut River indenting eastern coast of Essex	Saybrook.
Farm; river rising in northwest part of Guilford, flowing southwest through North Branford, East Haven, into Long Island Sound	New Haven.
Farmill; river rising in southern part of Monroe, flowing southeast through Huntington into Housatonic River	Derby.
Farmington; town in western part of Hartford County; area, 25 square miles.	Granby. Meriden.
Farmington; village in central part of town of same name	Meriden.
Farmington or **Tunxis**; river tributary to Connecticut River; is formed by two branches, east and west, which rise in Massachusetts and flow in a southeasterly direction through Colebrook, Hartland, and Barkhamsted, forming a single river in New Hartford, continuing south through Canton, forming boundary between Avon and Burlington, into Farmington, where it changes and flows in a northeastly direction through Avon and Simsbury, forming boundary between East Granby and Bloomfield, through Windsor, and flowing into the Connecticut River.	Granby. Hartford. Sandisfield.

	Names of sheets.
Farmington, East Branch; river rising in southern part of Granville, Mass., flows south through Hartland and Barkhamsted into Farmington River in northeast part of New Hartford	Granville.
Farmington, West Branch; rises in Massachusetts, flows south and joins East Branch Farmington in northeastern part of New Hartford, and together they form the Farmington River	Winsted.
Fawn; brook rising in Hebron and flowing south into Blockledge River in southeast part of Marlboro	Gilead.
Faxon; village in northeast part of East Haven	New Haven.
Fayerweather; island off southwest coast of Bridgeport, in Long Island Sound	Bridgeport.
Fenton; brook in Willington tributary to Fenton River	Woodstock.
Fenwick; village in southeast part of Old Saybrook, on coast Long Island Sound; also, on Connecticut Valley division New York, New Haven and Hartford R. R	Saybrook.
Fern; brook in northwest part of Watertown, tributary to branch of Naugatuck River	Waterbury.
Ferry; point projecting from northeast coast of Old Saybrook into Connecticut River	Saybrook.
Fish; island in Long Island Sound, off coast of Darien	Norwalk.
Fitchville; village in northern part of Bozrah, on Yantic River; also on New London Northern R. R	Norwich.
Fivemile; point projecting from southwest of coast East Haven into Long Island Sound	New Haven.
Fivemile; river heading in northeast part of Thompson, flowing southwest through Thompson and Putnam into Quinebaug River in southwest part of Killingly	Putnam.
Fivemile; brook in southern part of Oxford, tributary to Housatonic River	Derby.
Fivemile; brook in southeast part of North Haven, flows west into Quinnipiac River in southern part of same town	New Haven.
Fivemile; hill in central part of Oxford	Derby.
Fivemile; river in Fairfield County, flowing into Long Island Sound.	Norwalk.
Fivemile River; station on New York, New Haven and Hartford R. R	Norwalk.
Flanders; village in east central part of East Lyme on Niantic River.	New London.
Flanders; village in central part of Kent	New Milford.
Flat; hill in western part of Southbury; elevation, 698 feet	Danbury.
Flirt; hill in western part of Easton; elevation, 535 feet	Danbury.
Fluteville; village in southeast part of Litchfield, on Naugatuck River; also, on New York, New Haven and Hartford R. R	Waterbury.
Foot Rocks; group of islands off southern coast Branford, in Long Island Sound	New Haven.
Forestville; village in southeast part of Bristol, on Pequabuck River; also, on New York and New England R. R	Meriden.
Forge; pond in northwest part of Salisbury	Sheffield.
Forge; brook in southern part of Sharon, tributary to Housatonic River	Cornwall.
Fort; hill in central part of Groton; elevation, 220 feet	New London.
Fort Trumbull; village in east central part of New London, on Thames River	New London.
Fourmile; river rising in northwest part of East Lyme, flowing south into Long Island Sound	Saybrook.

	Names of sheets.
ourmile; brook rising in southeast part of Oxford, flowing into Housatonic River, in western part of Seymour	Derby.
owlers; island off northeast coast of Stratford and west of Milford, in Housatonic River	Bridgeport.
ranklin; town in northern part of New London County; area, 20 square miles	Norwich.
ranklin; village in central part of town of same name	Norwich.
ranklin Station; village in southwest part of Franklin, on Susquetonscut Brook; also on New London Northern R. R.	Norwich.
rench; river heading in Massachusetts, flowing south into Connecticut, and joins the Quinebaug River, in southwest part of Thompson.	Webster. Putnam.
reshwater; brook rising in northeast part of Enfield, flowing west through village of Thompsonville into Connecticut River	Hartford.
rog; pond in central part of Windham	Norwich.
rog; brook in Windham, tributary to Shetucket River	Norwich.
rost; point projecting into Long Island Sound from Westport	Norwalk.
uller; pond in northwest part of Kent	Cornwall.
urnace; brook rising in northeast part of Stafford, tributary to Willimantic River	Tolland.
ale Ferry; village in western part of Ledyard, on Thames River	New London.
ardner; brook in Bozrah, tributary to Yantic River	Norwich.
ardner; hill in southwest part of New Milford; elevation, 540 feet.	New Milford.
ardner; lake lying on border between towns of Bozrah, Montville, and Salem	Norwich.
aylordsville; village in northwest part of New Milford, on Housatonic River	New Milford.
eorge; hill in southern part of Southbury; elevation, 560 feet	Derby.
eorge Cellar; hill in western part of Orange; elevation, 230 feet	Derby.
eorgetown; village in northern part of Wilton, on Norwalk River; also on Danbury and Norwalk division of Housatonic R. R	Danbury.
iant; neck of land projecting from southern coast of East Lyme into Long Island Sound	New London.
ildersleeve; island west of town of Portland, in Connecticut River.	Middletown.
ilead; village in northern part of Hebron	Gilead.
lade; brook in eastern part of North Stonington, tributary to Green Fall River	Stonington.
lasko; village in southeast part of Griswold, on Pachaug River	Moosup.
lastonbury; town in southeastern part of Hartford County; area, 49 square miles.	Middletown. Gilead.
lastonbury; village in northwest part of town of same name	Middletown.
lenville; village in southwest part of Greenwich, on Byram River	Stamford.
oat; brook rising in northwest part of Middlebury, tributary to Hop Brook	Waterbury.
off; brook rising in southern part of Wethersfield, flows east into Connecticut, in eastern part of Rocky Hill	Middletown.
ood; hill in southwestern part of Oxford; elevation, 593 feet	Derby.
ood; hill in eastern part of Roxbury, extending in Woodbury; elevation, 1,005 feet	New Milford.
oodspeed Landing; village in western part of East Haddam, on Connecticut River	Saybrook.
oose; island off northwest coast Old Lyme, in Connecticut River	Saybrook.
oose; island off east coast New London, in Thames River	New London.
oose; hill in southwest part of Haddam; elevation, 620 feet	Guilford.

	Names of sheets.
Goshen; town in central part of Litchfield County; area, 44 square miles.	Cornwall. Winsted.
Goshen; village in south central part of town of same name	Winsted.
Goshen; village in southern part of Lebanon	Norwich.
Goshen; point projecting from southern coast of Waterford into Long Island Sound	New London.
Governor; one of the Thimble Islands lying off southern coast of Branford, in Long Island Sound	New Haven.
Granby; town in northwest part of Hartford County; area, 42 square miles.	Granville. Granby.
Granby; village in eastern part of town of same name	Granby.
Granby Station; village in southwestern part of East Granby, on Central New England and Western R. R	Granby.
Graniteville; village in southern part of Waterford	New London.
Grassy; island near the Norwalk Islands off mouth of Norwalk River and Long Island Sound	Norwalk.
Grassy; hill in eastern part of Lyme; elevation, 368 feet	Saybrook.
Grassy; hill in northwest part of Orange, having two summits, altitude of each being 270 feet	Derby.
Grassy Plain; village in the western part of Bethel, on Umpog Creek.	Danbury.
Gravelly; brook in eastern part of Woodstock, tributary to Muddy Brook	Putnam.
Great; brook in eastern part of New Milford, tributary to Housatonic River	New Milford.
Great; brook, left-hand branch of Sasco Brook, in Fairfield	Norwalk.
Great; brook rising in western part of Montville, flowing south into Niantic River	New London.
Great; brook in Groton, tributary to Poquonoc River	New London.
Great; brook in northern part of Farmington, tributary to the Farmington River	Meriden.
Great; hill in southwest part of Seymour; elevation, 640 feet	Derby.
Great; hill in northeast part of Naugatuck; elevation, 540 feet	Waterbury.
Great; hill in southeast part of Woodbury; elevation, 930 feet	Waterbury.
Great; hill in Portland and Chatham; elevation, 700 feet	Middletown.
Great; island off southwest coast of Old Lyme, in Connecticut River, separated from Old Lyme by Back River	Saybrook.
Great; mountain in southeast part of Sherman; elevation, 1,040 feet	New Milford.
Great; pond in northeast part of Ridgefield	Danbury.
Great Bare; mountain in eastern part of New Milford; altitude, 1,075 feet	New Milford.
Great Hill; pond in southeast part of Portland	Middletown.
Great Meadow; brook in northern part of Voluntown, tributary to Pachaug River	Moosup.
Green; harbor off eastern coast of New London, in Thames River	New London.
Green; island off southern coast of Branford, in Long Island Sound	New Haven.
Green; mountain in southwest part of New Milford, lying partly in Sherman; altitude, 1,100 feet	New Milford.
Green; pond in southeast part of Sherman	New Milford.
Green Fall; river heading in southeast part of Voluntown, flowing south through North Stonington into Paweatuck River, in western part of Hopkinton, R. I	Moosup.
Greenfarm; village in Westport	Norwalk.
Greenfield Hill; village in Fairfield	Norwalk.
***Greenville**; village in western part of Preston, on Quinebaug River.*	Norwich.

	Names of sheets.
reenwich; town in souhwest part of Fairfield County; area, 49 square miles	Stamford.
reenwich; borough in southern part of town of same name, on Long Island Sound, and also on New York, New Haven and Hartford R. R	Stamford.
reenwich; creek rising in eastern part of town of same name, flowing south into Indian Harbor	Stamford.
reenwich; cove, arm of Long Island Sound indenting southeastern coast of Greenwich	Stamford.
reenwich; point projecting from southeastern coast of Greenwich into Long Island Sound	Stamford.
reer; hill in northwestern part of Ledyard; elevation, 340 feet	New London.
reer; hill in northwestern part of Griswold; elevation, 360 feet	Moosup.
reystone; village in southwestern part of Plymouth, on Hancock Brook, also on New York and New England R. R	Waterbury.
ridley; mountain in northwestern part of Salisbury; altitude, 2,200 feet	Sheffield.
ridley; pond in eastern part of Harwinton	Waterbury
riswold; town in northeastern part of New London County; area, 37 square miles	Moosup.
riswold; point projecting from southwestern coast of Old Lyme into Long Island Sound	Saybrook.
riswold; island off southern coast East Lyme in Long Island Sound.	New London.
riswoldville; village in southern part of Wethersfield	Middletown.
rosvenordale; village in west central part of Thompson, on French River, also on Norwich and Worcester division, New York and New England R. R	Putnam.
roton; town in southern part of New London County; area, 35 square miles.	New London. Stonington.
roton; principal village in east central part of town of same name, on Thames River, reached by New York, Providence and Boston R. R	New London.
roton Long; point projecting from southeastern coast of Groton into Long Island Sound	New London.
rove; beach off southern coast Clinton and Westbrook, on Long Island Sound	Saybrook.
rove Beach; village in southeastern part of Clinton, on Shore Line division, New York, New Haven and Hartford R. R	Saybrook.
uardhouse; point projecting from southeastern coast Old Saybrook into Long Island Sound	Saybrook.
uernsey; hill in southeastern part of Litchfield; elevation, 860 feet.	Waterbury.
uilford; town in southeastern part of New Haven County; area, 50 square miles	Guilford.
uilford; borough in southern part of town of same name, on West River, reached by Shore Line division, New York, New Haven and Hartford R. R	Guilford.
uilford; harbor extending into coast of town of same name, off Long Island Sound	Guilford.
uilford; point on southern coast of town of same name, projecting into Long Island Sound	Guilford.
uilford Station; village in southern part of Guilford, on Shore Line division, New York, New Haven and Hartford R. R	Guilford.
ull Rocks; islands off southwest coast of Branford, in Long Island Sound	New Haven.
ully; brook rising in southeastern corner of Bloomfield, tributary to Park River	Hartford.

	Names of sheets.
Gumman; hill on boundary between Wilton and Norwalk; elevation, 280 feet	Norwalk.
Gungywamp; hill in southwestern part of Ledyard; elevation, 340 feet	New London.
Gurleyville; village in Marshfield	Woodstock.
Haddam; town in central part of Middlesex County; area, 46 square miles.	Middletown. Gilead. Guilford. Saybrook.
Haddam; village in northern part of town of same name on Connecticut Valley division, New York, New Haven and Hartford R. R.	Guilford.
Haddam; island in Connecticut River, in northeast part of town of same name	Guilford.
Haddam Neck; strip of land forming northeast coast of Haddam, lying east of Connecticut River and west of Salmon River	Saybrook.
Hadlyme; village in East Haddam and Lyme	Saybrook.
Hadlyme Landing; village in northwest corner Lyme, on Connecticut River	Saybrook.
Hadlyme Station; village in northeast part of Chester, on Connecticut River and on Connecticut Valley division, New York, New Haven and Hartford R. R	Saybrook.
Halfway; river rising in southern part of Newtown, flowing northeast into Housatonic River, forming part of boundary between Newtown and Monroe	Derby.
Hall; hill in northwest part of Somers; elevation, 320 feet	Palmer.
Hall Meadow; brook rising in southern part of Norfolk, flowing through northeast part of Goshen into Naugatuck River, in northwest part of Torrington	Winsted.
Hallenbeck; river rising in eastern part of Cornwall, flowing north, then west into Housatonic River, in western part of Canaan	Cornwall.
Hamburg; village in west central part of Lyme, on Eightmile River.	Saybrook.
Hamden; town in southern part of New Haven County; area, 34 square miles	New Haven.
Hammertown; village in north central part of Salisbury	Sheffield.
Hammonasset; beach off southeast coast of Madison, projecting into Long Island Sound	Guilford.
Hammonasset; river rising in southeast part of Durham, flowing south, forming boundary between Killingworth, Clinton, and Madison, into Long Island Sound	Guilford.
Hammonasset; point projecting from Hammonasset beach into Long Island Sound	Guilford.
Hampton; town in western part of Windham County; area, 26 square miles.	Woodstock. Norwich.
Hampton; village in central part of town of same name	Woodstock.
Hampton Station; village in northwest part of Hampton, and on New York and New England R. R	Woodstock.
Hancock; village in southern part of Plymouth, on Hancock Brook, also on New York and New England R. R	Waterbury.
Hancock; brook rising in southwestern part of Bristol, flows through southern Plymouth into Naugatuck River, in northern part of Waterbury	Waterbury.
Hanging; several hills in southwestern part of Berlin and northwestern Meriden; West Peak, elevation, 1,007 feet; South Mountain, 790 feet, and peak with no name, 877 feet	Meriden.

	Names of sheets.
Hank; hill in Mansfield	Woodstock.
Hanover; village in northern part of Sprague, on Little River	Norwich.
Hanover; brook in northern part of Newtown, tributary to Housatonic River	Danbury.
Hannover; pond in southwestern part of Meriden	Meriden.
Harbor; brook rising in eastern part of Meriden, tributary to Quinnipiac River. It has three branches: North and South and Cro Hollow Brook	Meriden.
Harrisville; village in extreme southeastern corner of Woodstock, on Muddy Brook	Putnam.
Hart; brook rising in northern part of Goshen, flowing into Naugatuck River, in northwestern part of Torrington	Winsted.
Hartford; city and town coextensive, situated in Hartford County, on Connecticut River, is reached by New York, New Haven and Hartford, New York and New England, Central New England and Western, Hartford and Connecticut Valley railroads; area 17 square miles.	Middletown. Hartford.
Hartland; town in northwestern part of Hartford County; area, 34 square miles.	Sandisfield. Winsted. Granville. Granby.
Harts; ponds in western part of Berlin	Meriden.
Harwinton; town in eastern part of Litchfield County; area, 34 square miles.	Winsted. Granby.
Harwinton; village in north central part of town of same name	Winsted.
Hatch; pond in southwest part of Kent	New Milford.
Hatchet; pond in northwestern part of Woodstock	Brookfield.
Hatchet; hill in northwestern part of Woodstock, extending into Southbridge, and having four peaks, elevations being 1,040, 1,020, and 1,020 feet, respectively	Brookfield.
Hatchett; point projecting from southeastern coast Old Lyme into Long Island Sound	Saybrook.
Hattertown; village in southern part of Newtown	Danbury.
Hawleyville; village in northwestern part of Newtown on Pond River; is reached by Housatonic R. R., by New York and New England R. R., and by Shepang, Litchfield and Northern R. R	Danbury.
Hatcock; point projecting from southern coast Branford into Long Island Sound	New Haven.
Hayden; village in northeastern part of Windsor, on Hartford division of New York, New Haven and Hartford R. R	Hartford.
Haystack; mountain in northwestern part of Norfolk; altitude, 1,680 feet	Sandisfield
Hazardville; village in central part of Enfield	Hartford.
Head; harbor extending into southern coast of Guilford	Guilford.
Hearthstone; hill in southeastern part of Franklin; elevation, 540 feet	Norwich.
Hebron; town in southern part of Tolland County; area, 37 square miles	Gilead.
Hebron; village in eastern part of town of same name	Gilead.
Hedgehog; hill in Stafford; elevation, 1,100 feet	Woodstock.
Higby; mountain in western part of Middletown and in Middlefield; altitude, 920 feet	Middletown.
Higganum; village in northern part of Haddam, on Candlewood Hill Brook	Guilford.

	Names of sheets.
High; one of the Thimble Islands, lying off southern coast of Branford, in Long Island Sound	New Haven.
High; hill in central part of Madison; elevation, 396 feet	Guilford.
High Ridge; village in extreme northern part of Stamford	Stamford.
High Rock Grove; village in northern part of Beacon Falls, on Naugatuck River	Derby.
Highland; village in western part of Middletown, on Meriden, Waterbury and Connecticut River R. R.	Middleton.
Highland; lake in southeastern part of Winchester	Winsted.
Hinckley; hill in eastern part of Stonington; elevation, 200 feet	Stonington.
Hoadley; point projecting from southwestern coast of Guilford into Long Island Sound	Guilford.
Hockanum; river rising in Shenipsit Lake, flows into the Connecticut River.	Hartford. Tolland.
Hockanum, South Branch; branch of Hockanum River, rising in southeastern part of Manchester, and flows into main river in western part of town	Hartford.
Hockanum; brook rising in Bethany, flows west into Naugatuck River in central part of Beacon Falls	Derby.
Hog; northern branch of Park River, rises in northern part of Bloomfield and flows south through that town, then through northeastern part of West Hartford, and joins the south fork Park River in west central part of Hartford	Hartford.
Hog; pond in southeastern part of Lyme	Saybrook.
Hogshead; point on southwestern coast of Madison, projecting into Long Island Sound	Guilford.
Holly; tidal pond, on coast of Darien	Norwalk.
Holt; hill in northwestern part of Plymouth; elevation, 960 feet	Waterbury.
Honey Pot; brook rising in central part of Cheshire, flows northeast into Quinnipiac River, in northeast part of same town.	Meriden.
Hooe Tower; hill in southwestern Bloomfield and extending into Simsbury; elevation, 960 feet	Granby.
Hop; river tributary to Willimantic River, rises in southwestern part of Tolland, flows south through Vernon, Bolton, Coventry, and Andover, forming a boundary between Coventry and Columbia.	Tolland. Gilead.
Hop; brook in northern part of Brookfield tributary to Housatonic River	Danbury.
Hop; brook rising in northeastern part of Canton, flows east into Farmington River in east central part of Simsbury	Granby.
Hop; brook rising in northwestern part of Middlebury, flows southeast into Naugatuck River in northern part of Naugatuck	Waterbury.
Hop Swamp; hill in eastern part of Middlebury; elevation, 600 feet.	Waterbury.
Hopeville; village in northwestern part of Griswold, on Pachaug River	Moosup.
Hopeville; village in southern part of Waterbury, on Naugatuck River; also, on Naugatuck division New York, New Haven and Hartford R. R	Waterbury.
Hopkins; hill in eastern part of Naugatuck; elevation, 830 feet	Derby.
Hopp; brook rising in western part of Bethany, tributary to Bladen River	Derby.
Horse; one of the Thimble islands, lying off southern coast of Branford, in Long Island Sound	New Haven.
Horse; hill in western part of Westbrook; elevation, 100 feet	Saybrook.
Horseneck; point projecting from southwestern coast of Greenwich into Long Island Sound	Stamford,

	Names of sheets.
Horseneck; brook rising in northeastern part of Greenwich, flows south into Long Island Sound	Stamford.
Horton; cove extending from Thames River into southeastern coast of Montville	New London.
Horton; point projecting from southwestern part of Branford into Long Island Sound	New Haven.
Hotchkissville; village in central part of Woodbury, on Pomperaug River	Waterbury.
Housatonic; river rising in Berkshire County, Mass., flows southward into Connecticut, intersecting Litchfield County, and forms the boundary between Fairfield and New Haven, and enters Long Island Sound in Bridgeport.	Cornwall. Clove. Danbury. Bridgeport. Derby. Sheffield.
Hubbell; hill in eastern part of Sherman; elevation, 940 feet	New Milford.
Hull; hill in western part of Oxford; elevation, 420 feet	Derby.
Hungry; hill in southern part of Guilford; elevation, 214 feet	Guilford.
Huntington; town in eastern part of Fairfield County; area, 31 square miles	Derby.
Huntington; village in central part of town of same name	Derby.
Huntington; hill in western part of Naugatuck; elevation, 850 feet	Derby.
Huntingtown; village in southern part of Newtown	Danbury.
Huntsville; village in south central part of Canaan on Hallenbeck River	Cornwall.
Hut; hill in eastern part of Bridgewater; elevation, 860 feet	New Milford.
Iasco; brook flowing into Long Island Sound, along boundary between Fairfield and Westport	Norwalk.
Indian; harbor, arm of Long Island Sound, indenting southern coast of Greenwich	Stamford.
Indian; pond in extreme corner of Sharon, on boundary between New York and Connecticut	Cornwall.
Indian; mountain in northwestern part of Sharon and southwestern part of Salisbury, greatest elevation being 1,420 feet	Cornwall.
Indian; river rises in Orange, flows south through Milford into Long Island Sound	Bridgeport.
Indian Head; hill in northeastern part of New Haven; elevation, 320 feet	New Haven.
Indian Neck; narrow strip projecting from southern part of Branford into Long Island Sound	New Haven.
Iron; hill in northeastern part of New Milford; elevation, 1,040 feet.	New Milford.
Island; brook in western part of Bridgeport, tributary to Pequonnock River	Bridgeport.
Ivorton; village in western part of Essex	Saybrook.
Ivy; mountain in northern part of Goshen; altitude, 1,640 feet	Winsted.
Jack; brook rising in northeastern part of Roxbury, flows south, thence west into Shepaug River in southwest part of Roxbury	New Milford.
Jack; brook in northern part of Oxford, tributary to Little River	Derby.
Jefferson; hill in eastern part of Litchfield; elevation, 1,220 feet	Waterbury.
Jeremy; brook in southeastern part of Southbury, tributary to Eight Mile Brook	Derby.
Jerusalem; village in southwestern part of New Milford, on Rocky River	New Milford.
Jewett; village in northwestern part of Griswold, on Quinebaug River, also on Norwich and Worcester division New York and New England R. R	Moosup.

	Names of sheets.
Jewett; village in central part of Lisbon, on New York and New England R. R., Providence division	Norwich.
Job; pond in southern part of Portland	Middletown.
John Johnson; hill in central part of Southbury; elevation, 400 feet.	Derby.
Johnson; point projecting from southwest coast of Branford in Long Island Sound	New Haven.
Jones; hill in southern part of Orange; elevation, 120 feet	New Haven.
Jordan; village in southern part of Waterford	New London.
Jordan; creek in southwestern part of Waterford, flowing into Long Island Sound	New London.
Jordan; brook rising in north central part of Waterford; flows south into Jordan Creek	New London
Joshua; point projecting from southern coast of Guilford into Long Island Sound	Guilford.
Joshua; cove extending into town of Guilford	Guilford.
Joyceville; village in northern part of Salisbury	Sheffield.
Judd; brook in northern part of Colchester, tributary to Salmon River	Gilead.
Judd Bridge; village in northwestern part of Roxbury, on Shepaug River; also on Shepaug, Litchfield and Northern R. R	New Milford
Kanosha; lake in western part of Danbury	Danbury. Carmel.
Keeny Cove; pond in northwest part of Glastonbury; extends into southern part of East Hartford	Middletown
Kelsey; point projecting from southern coast of Old Saybrook into Long Island Sound	Saybrook.
Kensington; village in northern part of Berlin	Meriden.
Kent; town in western part of Litchfield County; area, 48 square miles.	Clove. Cornwall. New Milfor
Kent; principal village in west central part of town of same name, on Housatonic R. R	New Milfor
Kent; range of mountains in central part of town of same name, greatest elevation being 1,340 feet	New Milfor
Kenyonville; village in Woodstock	Woodstock
Ketch; brook rising in western part of Ellington; flows west into Scantic River, in southern part of East Windsor	Hartford.
Kettle; creek, right-hand branch of Saugatuck River, in Weston	Norwalk.
Kettletown; brook rising in central part of Southbury; flows into Housatonic River, in central part of same town	Derby.
Keyser; island at mouth of Norwalk River, in Norwalk	Norwalk.
Killingly; town in eastern part of Windham County; area, 50 square miles	Putnam.
Killingly; village in northwest part of town of same name, on east bank of Fivemile River, and also on Norwich and Worcester division New York and New England R. R	Putnam.
Killingly Center; village in central part of Killingly, on Whetstone Brook	Putnam.
Killingworth; town in southwestern part of Middlesex County; area, 36 square miles	Guilford.
Killingworth; village in central part of town of same name	Guilford.
Kimball; hill in northeastern part of Hampton; elevation, 745 feet	Woodstoc
King; island lying off southwest coast of East Haven, in New Haven *Harbor*	New Have
King*; island lying* in Connecticut River between southern part of *towns of* Suffield and Enfield	Hartford.

	Names of sheets.
Kirby; brook in southern part of Washington, tributary to Shepaug River	New Milford.
Kitemaug; village in southeastern part of Montville, on Thames River; also on New London and Northern R. R	New London.
Knowlton; brook in Ashford, tributary to Mount Hope River	Woodstock.
Knowlton; hill in southwest corner of Ashford; elevation, 600 feet	Woodstock.
Kohanza; pond in northwestern part of Danbury	Danbury.
Konomoc; hill in northwestern part of Waterford; elevation, 389 feet	New London.
Lake Pond; brook in northwestern part of Waterford, tributary to Niantic River	New London.
Lakeville; village in south central part of Salisbury	Cornwall.
Lamentation; range of mountains extending through east part of Berlin and Meriden, the two highest peaks having an altitude of 725 and 654 feet, respectively	Meriden.
Lanesville; village in southwestern part of New Milford, on Still River	New Milford.
Lantern; hill in western part of North Stonington; elevation, 520 feet	Stonington.
Lantern Hill; pond in east central part of Ledyard, on boundary between that town and North Stonington	Stonington.
Latimer; hill in northern part of Thomaston; elevation, 1,022 feet	Waterbury.
Laurel; hill in extreme southeastern part of Norwich; elevation, 340 feet	Norwich.
Laurel Glen; village in eastern part of North Stonington, on Green Fall River	Stonington.
Laysville; village in northwestern part of Old Lyme	Saybrook.
Lead Mine; brook rising in southeastern part of Torrington; flows south through Harwinton into Naugatuck River in northeastern part of Thomaston.	Waterbury. Winsted.
Lead Mine; hill in Union; elevation, 1,240 feet	Woodstock.
Lebanon; town in northwestern part of New London County; area, 56 square miles.	Gilead. Norwich.
Lebanon; village in northern part of town of same name	Norwich.
Lebanon Station; village in eastern part of Lebanon, on New London Northern R. R	Norwich.
Lebanon Street; village in central part of Lebanon	Norwich.
Ledyard; town in central part of New London County; area, 41 square miles.	New London. Stonington.
Ledyard; village in central part of town of same name	New London.
Leesville; village in northwestern part of East Haddam, on Salmon River	Gilead.
Leete; island off southwestern coast of Guilford in Long Island Sound.	Guilford.
Leete Island; village in southwestern part of Guilford, on Shore Line division New York, New Haven and Hartford R. R	Guilford.
Leonard; pond in southwestern part of Kent	New Milford.
Leonard Bridge; village in western part of Lebanon, on New York, New Haven and Hartford R. R., Air Line division	Gilead.
Lewis; island off southeastern coast of Branford, in Long Island Sound	New Haven.
Lewis; gut, arm of Long Island Sound indenting southwest coast of Stratford	Bridgeport.
Liberty; hill in northern part of Lebanon; elevation, 500 feet	Gilead.

	Names of sheets.
Lieutenant; river rises in southern part of Lyme, flows southwest into Connecticut River, in west central part of Old Lyme	Saybrook.
Lime Rock; village in southeastern part of Salisbury	Cornwall.
Lindley; brook in eastern part of Wolcott, tributary to Mad River	Meriden.
Linsley; pond in southern part of North Branford	New Haven.
Lion Head; hill in northwestern part of Salisbury; elevation, 1,760 feet	Sheffield.
Lisbon; town in northern part of New London County; area, 16 square miles.	Norwich. Moosup.
Litchfield; town in central part of Litchfield County; area, 57 square miles.	Cornwall. New Milford. Winsted. Waterbury.
Litchfield, borough in central part of town of same name	Waterbury. Winsted.
Little; river rising in northern part of Hampton; flows south into Shetucket River, in southeastern part of Sprague.	Woodstock. Norwich.
Little; river rising in northern part of Oxford; flows southeast into Naugatuck River, in northwest part of Seymour	Derby.
Little; harbor in southwestern coast of Guilford	Guilford.
Little; pond in northeastern part of Ridgefield	Danbury.
Little; pond in central part of Litchfield	Waterbury.
Little; pond in northeastern part of Thompson	Webster.
Little; pond in central part of Winchester	Winsted.
Little City; village in western part of Haddam	Guilford.
Little Mount Tom; mountain in northeastern part of Washington; altitude, 1,100 feet	New Milfor
Little Narragansett; bay, arm of Long Island Sound, indenting southeastern coast of Stonington and southwestern coast of Rhode Island	Stonington.
Lockwood; pond in northern part of Watertown	Waterbury.
Long; beach off southern coast of Stratford extending into Long Island Sound	Bridgeport.
Long; brook in western part of Brookfield, tributary to Still River	Danbury.
Long; brook in northeastern part of Brooklyn, tributary to Quinebaug River	Putnam.
Long; cove, extending from Thames River into southwestern coast of Ledyard	New Londo
Long; hill in western part of Middletown; elevation, 260 feet	Middletow
Long; hill in southeastern part of Haddam, having two peaks, altitude of each being 520 feet	Guilford.
Long; hill in western part of Guilford; elevation, 300 feet	Guilford.
Long; hill in southeastern part of Huntington; elevation, 381 feet	Derby.
Long; hill in southwestern part of North Stonington	Stonington.
Long; island off eastern coast of Stratford in Housatonic River	Bridgeport.
Long; pond in northeastern part of Thompson	Webster.
Long; pond on boundary between Ledyard and North Stonington	Stonington.
Long; range of mountains in northwestern part of New Milford, greatest elevation being 1,080 feet	New Milford.
Long Hill; village in northern part of Trumbull on Pequonnock River, also on Housatonic R. R.	Derby.
Long Ledge; island off southern coast of East Lyme, in Long Island Sound	New London.

Names of sheets.

ow; brook rising in northwestern part of Middlebury,
theast into Naugatuck River in central part of Nauga-
.... Waterbury.

ow; pond in southern part of Middlebury.............. Waterbury.
Derby.

ow; pond in northern part of Bethlehem, extending
is .... Waterbury.

w Pond; brook rising in western part of Naugatuck,
to Naugatuck River.. Derby.

point projecting into Long Island Sound from Darien.. Norwalk.

; village in northern part of Stamford.................. Stamford.

y; village in western part of Preston.................. Norwich.

; brook in eastern part of Middlebury, tributary to Hop
.... Waterbury.

xtending from Connecticut River into west coast Old
d Lyme.. Saybrook.

a continuation of Lord Bay, extending into southwestern
yme.. Saybrook.

southwestern part of Lyme; elevation, 279 feet........ Saybrook.

off southwestern coast of East Haddam, in Connecticut
.... Saybrook.

te; hill in northern part of Huntington; elevation, 600
.... Derby.

luct; village in western part of Colchester on Salmon
lso on New York, New Haven and Hartford R. R........ Gilead.

in southwestern part of New London County; area, 37
iles.. Saybrook.

ipal village in Old Lyme, in west central part of town. Saybrook.

n; village in west central part of Old Lyme, on Connec-
er, and also on shore line division New York, New Haven
tford R. R.. Saybrook.

village in Weston.. Norwalk.

village in western part of Kent, on Macedonia Brook .. New Milford.

brook rising in southwestern part of Sharon, flows south New Milford.
stonic River in Kent. Cornwall.

rising in northern part of Wolcott, flows southwest
that town into Naugatuck River, in central part of
ry.. Meriden.

ising in central part of Norfolk, flows southeast into Still
east central part of Winchester........................ Winsted.

wn in southeastern part of New Haven County; area, 39
niles.. Guilford.

illage in southern part of town of same name, and on
ne division New York, New Haven and Hartford R. R.... Guilford.

ee lakes in northeastern part of Orange.................. New Haven.

village in northwestern part of Groton, on Thames
.... New London.

hill in extreme eastern part of Waterford, on point pro-
nto Thames River.. New London.

; pond in west central part of Ridgefield............... Carmel.

; town in eastern part of Hartford County; area, 21 Hartford.
iles. Middletown.
Tolland.
Gilead.

	Names of sheets.
Manchester; village in north central part of town of same name, on Hockanum River	Hartford.
Manchester Green; village in central part of Manchester	Hartford.
Manetock; hill in western part of Waterford; elevation, 240 feet	New London.
Mansfield; town in eastern part of Tolland County; area, 47 square miles.	Tolland. Woodstock. Gilead. Norwich.
Mansfield; village in northwestern part of town of same name	Tolland.
Mansfield Center; village in Mansfield	Woodstock.
Mansfield Depot; village in northwestern part of Mansfield on Willimantic River	Tolland.
Mansfield Hollow; village in Mansfield	Woodstock.
Marbledale; village in northwestern part of Washington on Aspetuck River	New Milford.
Margerie; pond in extreme northern part of Danbury	Danbury.
Marion; village in southwestern part of Southington	Meriden.
Marlboro; town in southeastern part of Hartford County; area, 24 square miles.	Middletown. Gilead.
Marlboro; village in central part of town of same name	Gilead.
Marlboro; pond in western part of town of same name	Gilead.
Maromas; village in northeastern part of Middletown on Connecticut River	Middletown.
Marsh; brook, tributary to Poland River, rising in Marsh Pond in extreme northeast corner of Plymouth	Meriden.
Marsh; pond in northwest corner of Bristol	Meriden.
Marsh; hill in central part of Orange; elevation, 200 feet	New Haven.
Mashamoquet; brook rising in western part of Pomfret, flows east into Quinebaug River, in southeastern part of same town	Putnam.
Mashapaug; village in northern part of Union on Mashapaug Pond	Brookfield.
Mashapaug; pond in northern part of Union	Brookfield.
Mashentuck; hill in central part of Killingly; elevation, 560 feet	Putnam.
Mason; island off southwest coast of Stonington, in Long Island Sound and east of Mystic Harbor	Stonington.
Mason; point projecting from southern coast of Mason Island into Long Island Sound	Stonington.
Massapeag; village in east central part of Montville on Thames River.	New London.
Maynard; hill in western part of Ledyard; elevation, 180 feet	New London.
McCook; point projecting from southeast coast of East Lyme into Long Island Sound	New London.
Meadow; brook rising in southern part of Windsor, flows south into Connecticut River, in northeast part of Hartford	Hartford.
Mean; brook rising in northeastern part of Monroe, flows southeast into Farmill River, in central part of Huntington	Derby.
Mechanicsville; village in southwestern part of Thompson, on Quinebaug River	Putnam.
Meeting-House; brook rising in southern part of Meriden, flows south into Quinnipiac River, in northern part of Wallingford	Meriden.
Melrose; village in northeastern part of East Windsor, on Springfield division of New York and New England R. R	Hartford.
Menunketesuck; point projecting from southern coast of Westbrook into Long Island Sound	Saybrook.
Menunketesuck; river in southern part of Westbrook, flows into *Long Island* Sound	Saybrook.

	Names of sheets.
Meriden; town in northeastern part of New Haven County; area, 23 square miles.	Meriden. New Haven. Middletown. Guilford.
Meriden; city and principal place in town of same name, on New York, New Haven and Hartford R. R., and on Meriden and Waterbury R. R	Meriden.
Merrick; brook rising in southern part of Hampton, flows through Scotland into Shetucket River	Norwich.
Merritt; hill in northern part of Stonington; elevation, 260 feet	Stonington.
Merrow; village in northwestern part of Mansfield, on New London Northern R. R., also on Willimantic River	Tolland.
Merwin; brook in central part of Brookfield, tributary to Hop Brook.	Danbury.
Merwinsville; village in northwestern part of New Milford, on Housatonic R. R	New Milford
Meshapock; brook in southern part of Middlebury, tributary to Hop Brook	Waterbury.
Meshhomasick; mountain in northeastern part of Portland, extending into Chatham; greatest elevation, 860 feet	Middletown.
Mianus; village in southeastern part of Greenwich, on Mianus River.	Stamford.
Mianus; river heading in New York, flows south through Stamford into Greenwich; thence into Coscob Harbor	Stamford.
Middle; river rising in northern part of Stafford; tributary to the Willimantic River	Tolland.
Middle Haddam; village in western part of Chatham, on Connecticut River	Middletown.
Middlebury; town in northwestern part of New Haven County; area, 19 square miles.	Waterbury Derby.
Middlebury; village in central part of town of same name	Waterbury.
Middlefield; town in northwestern part of Middlesex County; area, 15 square miles.	Middletown. Guilford.
Middlefield; village in southern part of town of same name, on New York, New Haven and Hartford R. R	Middletown.
Middlefield Center; village in central part of Middlefield, on New York, New Haven and Hartford R. R	Middletown.
Middletown; town in northern part of Middlesex County; area, 44 square miles.	Middleton. Guilford.
Middletown; principal place in northern part of town of same name, on Connecticut River	Middletown.
Miles; mountain in northeastern part of Salisbury; altitude, 1,140 feet	Sheffield.
Milford; town in southwestern part of New Haven County; area, 23 square miles.	Bridgeport. Derby. New Haven.
Milford; principal village of town of same name; situated in south central part, on Wepawaug River	Bridgeport.
Milford; point projecting from southwestern coast of Milford into Long Island Sound	Bridgeport.
Mill; brook rising in central part of Plainfield, flows west into Quinebaug River in southeastern part of Canterbury	Moosup.
Mill; brook rising in western part of Sharon and flows into New York.	Cornwall.
Mill; cove extending from Thames River into southwestern coast of Ledyard	New London.
Mill; creek in southern part of Old Lyme, flows into Long Island Sound.	Saybrook.

	Names of sheets.
Mill; creek in northeastern part of Haddam; tributary to Connecticut River	Gulford.
Mill; hill in central part of Colchester; elevation, 480 feet	Gilead.
Mill; river heading in Poundbridge, N. Y., flows south through Stamford into Stamford Cove	Stamford.
Mill; river rising in Cheshire, flows through Hamden into New Haven Harbor	New Haven.
Mill; river rising in western part of Monroe, flows south, forming boundary between Monroe, Trumbull, and Easton; thence through Fairfield into Long Island Sound.	Norwalk. Danbury.
Mill Brook; village in southwestern part of Colebrook	Winsted.
Mill Plain; village in Fairfield	Norwalk.
Mill Plain; village in western part of Danbury on New York and New England R. R	Carmel.
Mill Rock; hill in southeastern part of Hamden; elevation, 200 feet.	New Haven.
Milldale; village in southern part of Southington on Tenmile River.	Meriden.
Miller; pond in northeastern part of Waterford	New London.
Millington; village in east central part of East Haddam	Saybrook.
Millstone; point projecting from southwest corner of Waterford into Long Island Sound	New London.
Millville; village in western part of Naugatuck on Long Meadow Pond Brook	Derby.
Milton; village in northwestern part of Litchfield	Cornwall.
Mine; hill in southeastern part of New Milford; elevation, 860 feet.	New Milford.
Minnehaush; mountain in northeastern part of Glastonbury; highest elevation, 720 feet	Middletown.
Minortown; village in eastern part of Woodbury	Waterbury.
Misery; brook in southeastern part of Southington, tributary to Quinnipiac River	Meriden.
Mixville; village in western part of Cheshire	Meriden.
Mohawk; brook in western part of Barkhamsted, flows into west branch of Farmington River in southern part of town	Winsted.
Mohawk; pond in southeastern part of Cornwall	Cornwall.
Mohawk; mountain in southeastern part of Cornwall; greatest elevation, 1,600 feet	Cornwall.
Mohegan; village in northeastern part of Montville on Thames River.	New London.
Mohegan; hill in eastern part of Montville; elevation, 340 feet	New London.
Monroe; town in eastern part of Fairfield County; area, 27 square miles.	Danbury. Derby.
Monroe; village in eastern part of town of same name	Derby.
Montowese; village in southern part of North Haven on New York, New Haven and Hartford R. R	New Haven.
Montville; town in central part of New London County; area, 46 square miles.	Norwich. New London.
Montville; village in southeastern part of town of same name on Oxoboro Brook	New London.
Montville; village in southeastern part of town of same name on Thames River	New London.
Montville; hill in central part of Montville; elevation, 400 feet	New London.
Moodus; village in northwestern part of East Haddam	Saybrook. Gilead.
Moody Mill; pond in southwestern part of Fairfield, on boundary line	Bridgeport
Moore; brook in central part of Salisbury, tributary to Salmon Creek	Cornwall. Sheffield.

	Names of sheets.
Moose; hill in southeastern part of Oxford; elevation, 670 feet	Derby.
Moose; hill in southwestern part of Guilford; elevation, 260 feet	Guilford.
Moosehorn; brook in northern part of Roxbury, tributary to Shepaug River	New Milford.
Moosehorn; hill in northern part of Roxbury; elevation, 1,020 feet	New Milford.
Moose Meadow; village in Willington	Woodstock.
Moosup; pond in northeastern part of Plainfield	Moosup.
Moosup; river rising in western part of Rhode Island, flows west through Sterling and Plainfield into Quinebaug River in northwestern part of Plainfield	Moosup.
Moosup; village in central part of Plainfield, on Moosup River	Moosup.
Morgan; point projecting from southwestern part of East Haven into Long Island Sound	New Haven.
Morgan; pond in southern part of Ledyard	New London.
Morris; town in central part of Litchfield County; area, 19 square miles.	New Milford. Waterbury.
Morris; village in central part of town of same name	Waterbury.
Morris; cove extending into southwestern coast of East Haven from Long Island Sound	New Haven.
Morris Station; village in western part of Morris on Shepaug River.	New Milford.
Mountain; brook in northeastern part of Danbury, tributary to Wood Creek	Danbury.
Mountain; brook in northwestern part of Cheshire, tributary to Tenmile River	Meriden.
Mount Carmel; village in northern part of Hamden, on Northampton division, New York, New Haven and Hartford R. R.	New Haven.
Mount Hope; river rising in extreme southern part of Union, flows through Ashford and joins the Fenton in southeast corner of Mansfield, where they flow into the Natchaug River	Woodstock.
Mount Hope; village in Mansfield	Woodstock.
Mount Misery; brook rising in southeastern corner of Plainfield, flows south into Pachaug River in west central part of Voluntown.	Moosup.
Mount Misery; hill on boundary between Griswold and Voluntown; elevation, 420 feet	Moosup.
Mount Tom; pond in southwestern part of Litchfield, in Morris and Washington	New Milford.
Mud; brook in northern part of Seymour, tributary to Naugatuck River	Derby.
Mud; brook flowing into Long Island Sound, in Westport	Norwalk.
Mud; pond in western part of Norfolk	Winsted.
Muddy; brook rising in Agawam, Mass., flows south into Stony brook in southeastern part of Suffield	Hartford.
Muddy; brook rising in Southbridge, Mass., flows southeast through Woodstock into Quinebaug River, in northwestern part of Putnam	Putnam.
Muddy; pond in northern part of Woodstock	Brookfield.
Mudge; pond in northwestern part of Sharon	Cornwall.
Mulberry; point on southern coast of Guilford, projecting into Long Island Sound	Guilford.
Mulberry; hill in eastern part of Naugatuck; elevation, 700 feet	Derby.
Mullen; hill in western part of Canterbury; elevation, 585 feet	Norwich.
Mumford; cove extending from Long Island Sound into southern coast of Groton	New London.
Mystic; harbor, arm of Long Island Sound indenting southern coast of New London County, between Groton and Stonington	Stonington.

	Names of sheets.
Mystic; island off southwestern coast of Stonington, in Long Island Sound	Stonington.
Mystic; river heading in Ledyard and North Stonington, flows south, forming boundary between North Stonington, Stonington, and Groton and Ledyard, thence into Mystic Harbor.	New London. Stonington.
Mystic; village in western part of Stonington on Mystic River	Stonington.
Mystic Bridge; village in southwestern part of Stonington, on Mystic River	Stonington.
Mystic River; village in eastern part of Groton, on Mystic River	Stonington.
Natchaug; river rising in central part of Woodstock, flows south through Ashford and Chaplin into Shetucket River in northeastern part of Windham	Woodstock.
Naugatuck; town in northwestern part of New Haven County; area, 17 square miles.	Waterbury. Derby.
Naugatuck; village in town of same name on Naugatuck River	Derby.
Naugatuck; river rising in Norfolk, runs southward through New Haven County into Housatonic River.	Winsted. Waterbury. Derby.
Naugatuck Junction; village in southwestern part of Milford, on the Housatonic River	Bridgeport.
Nells; island off southwest corner of Milford in Housatonic River	Bridgeport.
Nepaug; village in west central part of New Hartford, on Nepaug River	Winsted.
Nepaug; river rises in eastern part of Torrington, flows southeast through New Hartford into Farmington River, in southwest part of Canton.	Granby. Winsted.
Neversink; pond on southern boundary between New Fairfield and Danbury	Danbury.
New Boston; village in northwestern part of Thompson, on Quinebaug River	Webster.
New Britain; town in southern part of Hartford county; area, 14 square miles	Meriden.
New Britain; city in town of same name in south central part of the town on New York and New England R. R	Meriden.
New Canaan; town in southwestern part of Fairfield County; area, 23 square miles.	Stamford. Norwalk.
New Canaan; borough in town of same name	Norwalk.
New Fairfield; town in northern part of Fairfield County; area, 11 square miles.	Clove. New Milford. Carmel. Danbury.
New Fairfield; village in southern part of town of same name	Danbury.
New Hartford; town in eastern part of Litchfield County; area, 38 square miles.	Winsted. Granby.
New Hartford; principal village in town of same name, located in northeastern part, on west branch of Farmington River	Granby.
New Haven; town in southern part of New Haven County; area, 13 square miles	New Haven.
New Haven; city in town of same name, and county seat of New Haven County	New Haven.
New Haven; harbor, arm of Long Island Sound, indenting southern coast of New Haven County, between Orange, New Haven, and *East Haven*	New Haven.

	Names of sheets.
New London; city in southern part of New London County; area, 6 square miles	New London.
New Milford; town in southwestern part of Litchfield County; area, 63 square miles.	Clove. New Milford. Danbury.
New Milford; principal village in town of same name, situated a little to the south of central part of the town, on Housatonic River.	New Milford.
New Preston; village in northwestern part of Washington, on Aspetuck River	New Milford.
New Preston Station; village in central part of Washington, on Shepaug River	New Milford.
Newent; village in central part of Lisbon	Norwich.
Newfield; village in northern part of Torrington, on east branch of Naugatuck River	Winsted.
Newfield; village in extreme northern part of Middletown, on Middletown branch New York, New Haven and Hartford R. R	Middletown.
Newington; town in southern part of Hartford County; area, 14 square miles.	Meriden. Middletown.
Newington; village in eastern part of town of same name	Middletown.
Newington Junction; village in northern part of Newington, on New York and New England R. R. and New York, New Haven and Hartford R. R	Middletown.
Newtown; town in northern part of Fairfield County; area, 60 square miles.	Danbury. Derby.
Newtown; borough in central part of town of same name	Danbury.
Niantic; principal village in East Lyme, in southeastern part of town, at the mouth of Niantic River	New London.
Niantic; river formed by two tributaries, Great Brook and Lakes Pond Brook; forms partial boundary between Waterford and East Lyme, and flows into Long Island Sound	New London.
Nichol; pond in south central part of Oxford	Derby.
Nichol Farms; village in southeastern part of Trumbull	Bridgeport.
Nickerson; hill in central part of Lyme; elevation, 485 feet	Saybrook.
Nineveh Falls; village in western part of Killingworth	Guilford.
Noank; village in southeastern part of Groton, on Mystic Harbor	Stonington.
Nonewaug; river rising in northeastern part of Bethlehem, flows southwest through that town into Pomperaug River, in central part of Woodbury	Waterbury.
Norfolk; town in northern part of Litchfield County; area, 17 square miles.	Sandisfield. Cornwall. Winsted.
Norfolk; principal village in town of Norfolk, in central part of town, on Central New England and Western R. R	Winsted.
North; cove, arm of Connecticut River, indenting southeast coast of Old Saybrook	Saybrook.
North; pond in western part of Lebanon, on boundary line between Hebron and Lebanon	Gilead.
North Ashford; village in Eastford	Woodstock.
North Bloomfield; village in extreme northeastern part of Bloomfield	Hartford.
North Branch; river rising in south part of Burlington, tributary to Pequabuck River	Meriden.
North Branch; river in eastern part of Meriden, tributary to Harbor Brook	Meriden.

	Names of sheets.
North Branch; river in northeastern part of Granby, tributary to Salmon Brook	Granby.
North Branford; town in southern part of New Haven County; area, 27 square miles.	New Haven. Guilford.
North Branford; village in southern part of town of same name, on Branford Harbor	New Haven.
North Bridgeport; village, part of Bridgeport City, on Pequonnock River	Bridgeport.
North Canaan; town in northwestern part of Litchfield County; area, 19 square miles.	Litchfield. Sandisfield. Cornwall. Winsted.
North Canton; village in northern part of Canton	Granby.
North Colebrook; village in northwestern part of Colebrook, on Sandy Brook	Sandisfield.
North Cromwell; village in eastern part of Cromwell, on Valley division New York, New Haven and Hartford R. R	Middletown.
North Franklin; village in northwestern part of Franklin	Norwich.
North Granby; village in northern part of Granby	Granby.
North Grosvenor Dale; village in west central part of Thompson, on French River	Putnam.
North Guilford; village in northwestern part of Guilford	Guilford.
North Haven; town in southern part of New Haven County; area, 21 square miles	New Haven.
North Haven; village in central part of town of same name, on Quinnipiac River	New Haven.
North Kent; village in northeastern part of Kent, on Housatonic River	Cornwall.
North Lyme; village in central part of Lyme, on Beaver Brook	Saybrook.
North Madison; village in central part of Madison	Guilford.
North Plains; village in southeastern part of East Haddam	Saybrook.
North Somers; village in northern part of Somers	Palmer.
North Spectacle; pond in eastern part of Kent	New Milford.
North Stamford; village in northeastern part of Stamford	Stamford.
North Stonington; town in eastern part of New London County; area, 57 square miles.	Moosup. Stonington.
North Stonington; village in southern part of town of same name, on Shunock River	Stonington.
North Wilton; village in Wilton	Norwalk.
North Woodstock; village in northeastern part of Woodstock	Putnam.
Northfield; village in southeastern part of Litchfield	Waterbury.
Northfield; hill in southeastern part of Litchfield; elevation, 1,150 feet	Waterbury.
Northford; village in northwestern part of North Branford	New Haven.
Northford Station; village in eastern part of North Haven, on New York, New Haven and Hartford R. R	New Haven.
Northville; village in northeastern part of New Milford, on East Aspetuck River	New Milford.
Norton; village in Darien	Norwalk.
Norton; south point of Belle Island, in Norwalk	Norwalk.
Norton; river rising in New Canaan; flows south, forming boundary between Darien and Stamford, into Long Island Sound	Stamford.
Norwalk; town in southwestern part of Fairfield County; area, 25 square miles	Norwalk.

	Names of sheets.
Norwalk; borough in town of same name, near mouth of Norwalk River, on New York, New Haven and Hartford R. R.	Norwalk.
Norwalk; group of islands off mouth of Norwalk River, forming part of Norwalk	Norwalk.
Norwalk; river rising in northeastern part of Ridgefield; flows south through Wilton and Norwalk into Long Island Sound.	Norwalk. Danbury.
Norwich; town in north central part of New London County; area, 28 square miles.	Norwich. New London
Norwich; city in town of Norwich, on Thames River	Norwich.
Norwich Town; village in western part of Norwich, on Yantic River	Norwich.
Norwich; pond in southeastern part of Lyme	Saybrook.
Nott; island off southeastern part of Lyme, in Connecticut River	Saybrook.
Noyes; river rising in eastern part of West Hartford; flows south into South Fork Park River, in southeastern corner of West Hartford.	Hartford.
Nut Plains; village in southeastern part of Guilford	Guilford.
Oakville; village in extreme northwestern part of Waterbury, on Steel Brook and on New York, New Haven and Hartford R. R., Watertown branch	Waterbury.
Obwebetuck; hill in southwestern part of Windham; elevation, 661 feet	Norwich.
Occum, village in northeastern part of Norwich on Shetucket River.	Norwich.
Ocean; beach extending from southern coast of New London into Long Island Sound	New London.
Old Lyme; town in southwestern part of New London County; area, 27 square miles	Saybrook.
Old Saybrook; town in southeastern part of Middlesex County; area, 18 square miles	Saybrook.
Old Saybrook; principal village in town of same name, situated in east central part of town on Shore Line division and also on Connecticut Valley division New York, New Haven and Hartford R. R.	Saybrook.
Oneco; village in east central part of Sterling, on New York and New England R. R., Providence division	Moosup.
Orange; town in southwestern part of New Haven County; area, 31 square miles.	Bridgeport. Derby. New Haven.
Orange Center; village in Orange	Derby.
Orcuttville; village in central part of Stafford, on Middle River and also on the New London Northern R. R	Tolland.
Ore Hill; village in western part of Salisbury on Central New England and Western R. R	Cornwall.
Osborne; village in central part of East Windsor, on Springfield division New York and New England R. R	Hartford.
Osprey; beach on southern coast of New London and on Long Island Sound	New London.
Oswegatchie; hill in southeastern part of East Lyme; elevation, 240 feet	New London.
Ox; hill in central part of Norwich; elevation, 380 feet	Norwich.
Oxford; town in western part of New Haven County; area, 33 square miles	Derby.
Oxford; village in town of same name in central part on Little River.	Derby.
Oxoboro; brook, rises in northwestern part of Montville, flows southeast into Thames River in southeast part of same town	New London.
Oxoboro; lake in northwestern part of Montville	New London.
Oyster; river in eastern part of Orange; flows into Long Island Sound.	New Haven.

	Names of sheets.
Oyster; river, rises in northern part Old Saybrook; flows into Long Island Sound	Saybrook.
Oyster; point projecting from southern part of New Haven Harbor	New Haven.
Oyster; point projecting from southern part of Orange into Long Island Sound	New Haven.
Pachaug; pond in south central part of Griswold	Moosup.
Pachaug; river heading in Western Rhode Island, flows west through Voluntown and Griswold into Quinebaug River in northwestern part of Griswold	Moosup.
Pachaug; village in central part of Griswold, on Pachaug River	Moosup.
Packersville; village on boundary between Canterbury and Plainfield, situated on Mill Brook	Moosup.
Paine; hill in Pomfret; elevation, 705 feet	Woodstock.
Painters Ridge; mountain in northern part of Roxbury, extending into Washington; altitude, 1,100 feet	New Milford.
Park; pond in southwestern part of Winchester	Winsted.
Park; river in Hartford, tributary to Connecticut River	Hartford.
Park Lane; village in central part of New Milford	New Milford.
Parnassus; mountain in central part of East Haddam; altitude, 615 feet	Saybrook.
Parrish; hill in Scotland, Windham, and Chaplin; elevation, 620 feet.	Norwich.
Pataguanset; lake in central part of East Lyme	New London.
Pataguanset; river rising in central part of East Lyme; flows south into Long Island Sound	New London
Patchogue; river, rises in central part of Westbrook; flows south into Long Island Sound	Saybrook.
Patton; brook in northeastern part of Southington tributary to Quinnipiac River	Meriden.
Pautipaug; hill in western part of Sprague; elevation, 400 feet	Norwich.
Pawcatuck; river heading in Rhode Island; flows west forming eastern boundary of Stonington and partial boundary of North Stonington, thence into Little Narragansett Bay	Stonington.
Peak; mountain in northeastern part of East Granby; altitude, 665 feet	Hartford.
Pecausett; pond in southwestern part of Portland	Middletown.
Peck; hill in northwestern part of Woodbridge; elevation, 500 feet	Derby.
Peet; hill in northern part of New Milford; elevation, 1,193 feet	New Milford.
Pemberwick; village in southwestern part of Greenwich	Stamford.
Pembroke; pond on boundary between Bridgeport and Stratford	Bridgeport.
Pendleton Hill; village in northeasten part of North Stonington	Moosup.
Penny; island off southeastern coast of Groton in Mystic Harbor and on New York, Providence and Boston R. R	Stonington.
Pequabuck; river rising in northern part of Plymouth, flows southeast through Bristol into Plainville where it takes a northerly course into Farmington River in central part of Farmington.	Waterbury. Meriden.
Pequonnock; river flowing through Trumbull and Bridgeport into Long Island Sound.	Derby. Bridgeport.
Pequot; hill in eastern part of Groton; elevation, 180 feet	Stonington.
Perkins; mountain in northeastern part of Somers, having two peaks, altitude of peaks being 980 and 840 feet, respectively	Palmer.
Phelps; brook in northern part of Burlington, tributary to Farmington River	Granby.
Phelps; brook in western part of North Stonington, tributary to Shunock River	Stonington.
Phœnixville; *village in Eastford*	Woodstock.

	Names of sheets.
Pickerel; lake in southwestern part of Colchester, extending into East Haddam	Gilead.
Pine; brook in northern part of North Haven, tributary to Quinnipiac River	New Haven.
Pine; brook in western part of Bethany tributary, to Bladen River	Derby.
Pine; brook rising in northwestern part of Chatham, flows southeast into Salmon River, in northwestern part of East Haddam	Middletown.
Pine; brook in western part of Colchester, tributary to Salmon River	Gilead.
Pine; hill in western part of Plymouth; elevation, 980 feet	Waterbury.
Pine; island off southwestern coast of Groton, in Long Island Sound	New London.
Pine; mountain in central part of Norfolk; altitude, 1,520 feet	Winsted.
Pine; point projecting into Long Island Sound from Norwalk	Norwalk.
Pine; river rising in southern part of Wallingford, flows south into Five Mile Brook, in southeastern part of North Haven	New Haven.
Pine Bridge; village in southern part of Beacon Falls, on Naugatuck River	Derby.
Pine Creek; point projecting into Long Island Sound from Fairfield	Norwalk.
Pine Meadow; village in northeastern part of New Hartford, on west branch of Farmington River	Granby.
Pine Orchard; village in southern part of Branford, on Shore Line division New York, New Haven and Hartford R. R	New Haven.
Pine Rock; hill in Hamden and New Haven; altitude, 271 feet	New Haven.
Pinnacle; hill in northern part of Washington; elevation, 1,280 feet.	New Milford.
Pisgah; mountain in south central part of Durham, having two peaks, altitude of each being 640 feet	Guilford.
Pisgah; hill in western part of Oxford, extending into Southbury; elevation, 620 feet	Derby.
Pisgah; mountain in central part of Colebrook; altitude, 1,440 feet	Sandisfield.
Pistapaug; mountain in southwestern part of Durham, greatest elevation being 640 feet	Guilford.
Pistapaug; pond in Durham, Wallingford, North Branford, and Guilford	Guilford.
Plain; hill in northwestern part of Norwich; elevation, 480 feet	Norwich.
Plainfield; town in southern part of Windham County; area, 44 square miles.	Putnam. Moosup.
Plainfield; village in south central part of Plainfield, at junction of two branches of New York and New England R. R	Moosup.
Plainfield Junction; village in western part of Plainfield, at junction of two branches of New York and New England R. R	Moosup.
Plainville; town in southwestern part of Hartford County; area, 9 square miles	Meriden.
Plainville; principal village in town of same name on Pequabuck River	Meriden.
Plane; brook rising in northwestern part of Westbrook, tributary to Menunketesuck River	Saybrook.
Plantsville; village in southern part of Southington, on Quinnipiac River, and also on New York, New Haven and Hartford R. R	Meriden.
Pleasant; beach on southwestern coast of Waterford, extending into Long Island Sound	New London.
Pleasant Valley; village in southern part of Barkhamsted	Granby.
Pleasure; hill in northern part of Franklin; elevation, 520 feet	Norwich.
Plumb; hill in central part of Litchfield; elevation, 960 feet	Waterbury.
Plumb; hill in southern part of *Washington*; elevation, 1,070 feet	New Milford.

	Names of sheets.
Plymouth; town in southeastern part of Litchfield County; area, 22 square miles.	Waterbury. Meriden.
Plymouth; principal village in town of same name, located in western part of the town	Waterbury.
Pocotopaug; creek in Chatham, tributary to Pine Brook	Middletown.
Pocotopaug; lake in northeastern part of Chatham	Middletown.
Podunk; river rising in northeastern part of South Windsor, flows into Connecticut River, in northwest corner of East Hartford	Hartford.
Poland; river rising in eastern part of Harwinton, flows south into Pequabuck River	Waterbury.
Polkville; village in northeastern part of Bristol	Meriden.
Polls; hill in southeastern part of Montville; elevation, 520 feet	New London.
Pomfret; town in central part of Windham County; area, 42 square miles.	Woodstock. Putnam.
Pomfret; village in northeastern part of town of same name	Putnam.
Pomfret Center; village in northeastern part of Pomfret	Putnam.
Pomfret Landing; village in southeastern part of Pomfret, on Mashamoquet Brook	Putnam.
Pomfret Station; village in central part of Pomfret, on New York and New England R. R	Putnam.
Pomfret Street; village in northeastern part of Pomfret	Putnam.
Pomperaug; river rising in northeastern part of Bethlehem, flows south through Woodbury into Housatonic River, in southern part of Southbury.	Derby. Danbury. Waterbury.
Pomperaug; village in southern part of Woodbury, on Pomperaug River	Waterbury.
Pomperaug Valley; village in central part of Southbury	Derby.
Pond; brook rising in southern part of Brookfield, flows northeast through northwest part of Newtown into Housatonic River	Danbury.
Pond; hill in southeastern part of Wallingford; elevation, 340 feet	New Haven.
Pond; hill in northern part of Cornwall; elevation, 1,425 feet	Cornwall.
Pond; mountain in northern part of New Fairfield; altitude, 1,120 feet	New Milford.
Pond; point projecting from southeast coast of Milford into Long Island Sound	Bridgeport.
Pond Meadow; village in northern part of Westbrook, on Falls River	Saybrook.
Pond Meadow; swamp in southwestern corner of Haddam, extending into Killingworth	Guilford.
Pond Rock; range of mountains extending along eastern part of East Haven into Branford and North Branford	New Haven.
Ponset; village in central part of Haddam	Guilford.
Poquetanock; village in southwestern part of Preston	New London.
Poquetanock; cove extending from Thames River into western coast Ledyard and Preston	New London.
Poquonoc; lake in central part of Groton	New London.
Poquonoc; plain in southwestern part of Groton on Long Island Sound	New London.
Poquonoc; river in southwestern part of Groton; flows south into Long Island Sound	New London.
Poquonoc; village in northern part of Windsor on Farmington River	Hartford.
Poquonoc Bridge; village in southwestern part of Groton	New London.
Pootatuck; river rising in southern part of Newtown; flows north into Housatonic River, in northern part of the town	Danbury.

	Names of sheets.
t; island between Stratford and Milford, in Housatonic	Bridgeport.
amp; brook rising in central part of Avon; flowing into gton River in northern part of Farmington	Meriden.
town in northern part of Middlesex County; area, 26 miles	Middletown.
principal village in town of same name; on New York, aven and Hartford R. R. and Connecticut River	Middletown.
t-house off eastern coast of Saybrook in Connecticut	Saybrook.
f the Thimble Islands, lying off southern coast of Bran- Long Island Sound	New Haven.
nd in Woodstock	Woodstock.
island off east coast of New London in Thames River	New London.
brook in eastern part of Harwinton, tributary to Poland	Winsted.
ke in central part of East Lyme	New London.
e, arm of Connecticut River, indenting eastern coast of ok	Saybrook.
mountain in northwestern part of North Stonington; alti- 40 feet	Stonington.
town in north central part of New London County; area, re miles.	Norwich. Moosup. New London. Stonington.
principal village in town of same name, situated in east part of town	Moosup.
village in western part of town of same name on Quinebaug	Norwich.
hill in southwestern part of Middlebury, extending into ; elevation, 660 feet	Derby.
hill in southwestern part of Kent; elevation, 1,300 feet....	Clove.
ek in western part of East Windsor, tributary to Connecti- ver	Hartford.
town in northern part of New Haven County; area, 16 miles.	Waterbury. Meriden. Derby. New Haven.
village in central part of town of same name	Meriden.
hill in Westport; elevation, 200 feet	Norwalk.
hill in southwestern part of East Haven; elevation, 200 feet	New Haven.
hill in New Canaan; elevation, 437 feet	Norwalk.
hill in northeastern part of Pomfret; elevation, 680 feet ..	Putnam.
hill in northern part of Woodbridge; elevation, 475 feet ..	Derby.
hill in western part of Windham; elevation, 420 feet	Norwich.
hill in southern part of Guilford; elevation, 161 feet......	Guilford.
hill in central part of Preston; elevation, 320 feet........	Moosup.
hill in northwestern part of Colchester; elevation, 480 feet.	Gilead.
mountain in eastern part of Salisbury; altitude, 1,475 feet.	Cornwall.
mountain in southwestern part of Litchfield; altitude, 1,365	New Milford.
hill in northern part of Scotland; elevation, 540 feet	Norwich.
brook in western part of Southbury, tributary to Housa- iver	Danbury.

	Names of sheet
Purgatory; brook in eastern part of Watertown, tributary to branch of Naugatuck River	Waterbury.
Putnam; town in eastern part of Windham County; area, 27 square miles	Putnam.
Putnam; principal village in town of same name, on Quinebaug River, and also on New York and New England R. R	Putnam.
Putnam Heights; village in southern part of Putnam	Putnam.
Quaddick; village in southeastern part of Thompson	Putnam.
Quaduck; brook rising in eastern part of Killingly; flows south into Sterling and joins Moosup River	Moosup.
Quaker; hill in eastern part of Waterford; elevation, 250 feet	New Londo
Quaker Farms; village in western part of Oxford	Derby.
Quaker Hill; village in northeastern part of Waterford	New Londo
Quandunk; brook in southwestern part of Killingly, tributary to Quinebaug River	Putnam.
Quarryville; village in northwestern part of Bolton	Tolland.
Quassapaug pond in northwestern part of Middlebury	Waterbury.
Quiambog; cove, arm of Long Island Sound, indenting southwest coast of Stonington	Stonington.
Quinebaug; village in northwestern part of Thompson, on New York and New England R. R	Webster.
Quinebaug; pond in southwestern part of Killingly	Putnam.
Quinebaug; eastern branch of Thames River, rises in Massachusetts; flows south through entire eastern part of Connecticut into Thames River in southeastern part of Norwich	Norwich.
Quinebaug; river tributary to Shetucket River; rises in southern part of Massachusetts; flows south into Shetucket River in extreme northeastern part of Preston.	Webster. Putnam. Moosup.
Quinnatisset; brook in southern part of Thompson, tributary to French River	Putnam.
Quinnipiac; village in northern part of North Haven, on Quinnipiac River	New Have
Quinnipiac; river rising in western part of New Britain; flows through Plainville, Southington, Cheshire, Meriden, Wallingford, and New Haven, into New Haven harbor.	New Have Meriden.
Quonnipaug; mountain in northern part of Guilford; altitude, 532 feet.	Guilford.
Quonnipaug; lake in northern part of Guilford	Guilford.
Rabbit; hill in southeastern part of Warren; elevation, 1,340 feet	New Milfo
Rabbit Rock; hill in southeastern part of North Haven; elevation, 340 feet	New Have
Race; brook rising in Woodbridge; flows south into Woppopaug River, in northwestern part of Orange	Derby.
Race; hill in western part of Madison; elevation, 322 feet	Guilford.
Ragged; hill in Pomfret; elevation, 845 feet	Woodstoc
Ragged; mountain in western part of Berlin; altitude, 754 feet	Meriden.
Ragland Hooppole; hill in southwestern part of Woodbury; elevation, 640 feet	Waterbu
Rainbow; village in northwestern part of Windsor, on Farmington River	Hartford.
Ram; island off mouth of Norwalk River, in Long Island Sound	Norwalk.
Rat; mountain in northeastern part of Washington; altitude, 1,120 feet	New Mil
Rattlesnake; hill in northeastern part of Somers, extending into *Hampden*, Mass	Palmer.

	Names of sheets.
Rattlesnake; hill in northwestern part of North Canaan, having two peaks, the altitude of which are 960 and 980 feet, respectively	Sheffield.
Rattlesnake; mountain in southern part of Farmington; altitude, 750 feet	Meriden.
Rawson; village in northwestern part of Hampton	Woodstock.
Raymond; hill in northwestern part of Montville; elevation, 588 feet	New London.
Red; mountain in east central part of Cornwall; altitude, 1,660 feet.	Cornwall.
Red City; village in central part of Oxford, on Little River	Derby.
Redding; town in central part of Fairfield County; area, 13 square miles	Danbury.
Redding; village in central part of town of same name	Danbury.
Redding Ridge; village in eastern part of Redding	Danbury.
Reed Gap; hill in western part of Durham; elevation, 700 feet	Guilford.
Reynolds Bridge; village in southeastern part of Thomaston on Naugatuck River, and on New York, New Haven and Hartford R. R	Waterbury.
Ridgebury; village in northwestern part of Ridgefield	Carmel.
Ridgefield; town in western part of Fairfield County; area, 36 square miles.	Carmel. Danbury. Stamford. Norwalk.
Ridgefield; principal village in south central part of town of same name.	Danbury. Carmel.
Riga; lake in northwestern part of Salisbury	Sheffield.
Riga; mountain in northwestern part of Salisbury; altitude, 1,900 feet.	Sheffield.
Rigg Street; brook in northern part of Oxford, tributary to Jack Brook	Derby.
Rimmon; brook rising in southeastern part of Beacon Falls; flows into Naugatuck River in northern part of Seymour	Derby.
Rimmon; hill in southwestern part of Beacon Falls; elevation, 400 feet	Derby.
Ritcher; mountain in south central part of North Stonington; altitude, 320 feet	Stonington.
Riverside; village in southern part of Oxford	Derby.
Riverside; village in southeastern part of Greenwich, on Coscob Harbor and on New York, New Haven and Hartford R. R	Stamford.
Riverton; village in northwestern part of Barkhamsted	Winsted.
Rixtown; mountain in Griswold, Preston and North Stonington, having four peaks, the altitudes of which are 440, 500, 520 and 600 feet, respectively	Moosup.
Roaring; brook rising in northeastern part of Glastonbury; flows southwest into Connecticut River	Middletown.
Roaring; brook rising in eastern part of Stafford, flowing into Willimantic River in northwestern part of Willington.	Woodstock. Tolland.
Roaring; brook rising in southern part of Canton; flows south through Avon into Farmington River	Granby.
Roast Meat; hill in southern part of Killingworth; elevation, 328 feet.	Guilford.
Robertsville; village in southeastern part of Colebrook	Winsted.
Robinson; hill in western part of Hampton; elevation, 827 feet	Woodstock.
Rock Fall; village in northeastern part of Middlefield, on New York, New Haven and Hartford R. R	Middletown.
Rock Rimmon; mountain in southern part of Beacon Falls and in Seymour; altitude 570 feet	Derby.

	Names of sheets.
Rockdale; village in southeastern part of Watertown, on Steel brook and also on New York, New Haven and Hartford R. R	**Waterbury.**
Rockhouse; hill in southern part of Oxford; elevation, 590 feet	**Derby.**
Rockland; village in northern part of Madison	**Guilford.**
Rockville; principal village of Vernon, located in northeastern part of town, on Hockanum River, also on New York and New England R. R	**Tolland.**
Rockwell; hill in southeastern part of Stafford; elevation, 933 feet	**Tolland.**
Rocky; river, rises in central part of Sherman, flows south until it reaches east central part of New Fairfield, where it changes its course and flows north into Housatonic River in west central part of New Milford	**New Milford.**
Rocky; hill in western part of Bridgewater; elevation, 700 feet	**New Milford.**
Rocky Glen; village in northern part of Newtown, on Pootatuck River	**Danbury.**
Rocky Hill; town in southern part of Hartford County; area, 19 square miles	**Middletown.**
Rocky Hill; village in eastern part of town of same name on Connecticut River, also on New York, New Haven and Hartford R. R.	**Middletown.**
Rocky Neck; hill in southwestern part of East Lyme on coast; elevation, 120 feet	**New London.**
Roger; island off southern coast of Branford, in Long Island Sound	**New Haven.**
Roger; lake in Lyme and Old Lyme	**Saybrook.**
Romford; village in northeastern part of Washington, on Shepaug River, also on Shepaug, Litchfield and Northern R. R	**New Milford.**
Rooster; river rising in western part of Trumbull, flows south through Bridgeport, forming partial boundary between Bridgeport and Fairfield, into Long Island Sound	**Bridgeport.**
Rose; hill in northwestern part of Ledyard; elevation, 280 feet	**New London.**
Round; hill in northern part of Woodbridge; elevation, 590 feet	**Derby.**
Round; hill in central part of Farmington; elevation, 320 feet	**Meriden.**
Round; hill in southwestern part of Middletown; elevation, 650 feet.	**Middletown.**
Round; hill in northwestern part of Greenwich; elevation, 551 feet	**Stamford.**
Round; hill in eastern part of Easton; elevation, 595 feet	**Danbury.**
Round; mountain in north central part of Ridgefield; altitude, 900 feet	**Carmel.**
Round; pond in western part of Ridgefield	**Carmel.**
Roxbury; town in southern part of Litchfield County; area, 27 square miles	**New Milford.**
Roxbury; principal village in town of same name	**New Milford.**
Roxbury Falls; village in southwestern part of Roxbury on Shepaug River, also on Shepaug, Litchfield and Northern R. R	**New Milford.**
Roxbury Station; village in western part of Roxbury on Shepaug River, also on Shepaug, Litchfield and Northern R. R	**New Milford.**
Rucum; hill in southeastern part of Roxbury; elevation, 860 feet	**New Milford.**
Sachem Head; point projecting from southern coast of town of Guilford into Long Island Sound	**Guilford.**
Sachem Head Station; village in southern part of Guilford, on New York, New Haven and Hartford R. R	**Guilford.**
Sadds Mills; village in northeastern part of East Windsor	**Hartford.**
Salem; town in western part of New London County; area, 30 square miles.	**Gilead.** **Norwich.** **Saybrook.** **New London.**

	Names of sheets.
Salem; village in central part of town of same name	Saybrook.
Salisbury; town in northwestern part of Litchfield County; area, 61 square miles.	Sheffield. Cornwall.
Salisbury; village in central part of town of same name on Central New England and Western R. R	Cornwall.
Salmon; brook rising in northeastern part of Granby, tributary to Farmington River	Granby.
Salmon; creek rising in western part of Salisbury flowing into Housatonic River in southeastern part of Salisbury	Cornwall.
Salmon; river tributary to Connecticut River, rises in southern part of Colchester, flows northwest, thence southwest through Colchester into Connecticut River	Gilead.
Salmon; cove at mouth of Salmon River, forms partial boundary between Haddam and East Haddam	Saybrook.
Salt; island off southern coast of Westbrook in Long Island Sound	Saybrook.
Saltonstall; lake forming partial boundary between East Haven and Branford	New Haven.
Saltworks; bay off southern coast of Westbrook and Old Saybrook in Long Island Sound	Saybrook.
Sandford; mountain in southwestern part of Cheshire; altitude, 920 feet	New Haven.
Sandy; point projecting from eastern coast of Orange into New Haven Harbor	New Haven.
Sandy; brook rising in western part of Sandisfield, Mass.; flows southeast through Colebrook into Still River.	Sandisfield. Winsted.
Sandy; point projecting from west coast of Waterford into Niantic River	New London.
Sandy Hook; village in northern part of Newtown on Pootatuck River	Danbury.
Sandy Hook Station; village in northern part of Newtown on Pootatuck River; also on New York and New England R. R	Danbury.
Sanford Station; village in western part of Redding on Danbury and Norwalk division of Housatonic R. R	Danbury.
Sargent; river; rises in central part of Bethany; flows south into West River, in northeastern part of Woodbridge	New Haven.
Satans Kingdom; hill in northeastern part of New Hartford; elevation, 110 feet	Granby.
Saugatuck; village at mouth of Saugatuck River, in Westport, on New York, New Haven and Hartford R. R	Norwalk.
Saugatuck; river; rises in southern part of Danbury; flows southeast through Reading, Weston and Westport into Long Island Sound.	Danbury. Norwalk.
Savin Rock; village in southeastern part of Orange on Long Island Sound	New Haven.
Savin Rock; two islands lying off eastern coast of Orange, in Long Island Sound	New Haven.
Saybrook; town in southeastern part of Middlesex county; area, 15 square miles.	Guilford. Saybrook.
Saybrook; point projecting from southeastern coast of Old Saybrook into Connecticut River	Saybrook.
Saybrook; jetties at entrance to Connecticut River in Long Island Sound	Saybrook.
Saybrook Junction; village in east central part of Old Saybrook, at junction of Connecticut Valley and New York, New Haven and Hartford R. R	Saybrook.

	Names of sheets.
Scantic; village in western part of East Windsor	Hartford.
Scantic; river rising in northwest corner of Stafford, flows north into Hampden, Mass., and thence takes a westerly course through Somers, Enfield and East Windsor into Connecticut River.	Tolland. Hartford.
Scitico; village in eastern part of Enfield, on Scantic River, also on New York and New England R. R., Springfield Division	Hartford.
Scotland; town in southwestern part of Windham County; area, 19 square miles	Norwich.
Scotland; village in central part of town of same name	Norwich.
Scotland Station; village in southwestern part of Scotland, on Shetucket River; also on New York and New England R. R	Norwich.
Scott; cove indenting coast of Darien	Norwalk.
Scott Ridge; mountain in western part of Ridgefield, having two peaks, the altitudes of which are 980 and 1,000 feet, respectively.	Carmel.
Sea; hill in central part of North Branford; elevation, 380 feet	New Haven.
Sebethe; river rising in western part of Berlin, flows east through Berlin, thence southeast, forming boundary between Berlin, Cromwell and Middletown, into Connecticut River.	Meriden. Middletown.
Second; hill in northern part of Bridgewater; elevation, 950 feet.	New Milford.
Selden; creek in western part of Lyme, tributary to Connecticut River	Saybrook.
Selden Neck; point extending from coast of Lyme into Connecticut River	Saybrook.
Seymour; town in western part of New Haven County; area, 15 square miles	Derby.
Seymour; principal village in town of same name, on Naugatuck River, also on branch New York, New Haven and Hartford R. R	Derby.
Seymour; marshy point at mouth of Saugatuck River	Norwalk.
Shailorville; village in northeastern part of Haddam, on Connecticut River, and on Connecticut Valley Division New York, New Haven and Hartford R. R	Saybrook.
Shaker; pond in northern part of Enfield	Springfield.
Shaker; village in northeastern part of Enfield	Springfield.
Shaker Station; village in northeastern part of Enfield, on New York and New England R. R	Springfield.
Sharon; town in western part of Litchfield County; area, 59 square miles	Carmel.
Sharon; principal village in town of same name	Cornwall.
Sharon Valley; village in northwestern part of Sharon	Cornwall.
Sharpe; hill in Pomfret; elevation, 710 feet	Woodstock.
Shaw; cove extending from Thames River into east shore of New London	New London.
Shaw; lake in northeastern part of East Haddam	Gilead.
Sheffield; island off mouth of Norwalk River in Long Island Sound.	Norwalk.
Shelton; borough in Huntington, on Housatonic River, also on New Haven and Derby R. R	Derby.
Shenipsit; lake forming partial boundary between Ellington, Tolland, and Vernon	Tolland.
Shepaug; river rises in Litchfield, flows south through Washington and Roxbury, into Housatonic River, in western part of Southbury.	Danbury. New Milford.
Shepherd; pond in northwestern part of New Hartford	Winsted.
Sherman; town in northern part of Fairfield County; area, 24 square miles.	Clove. New Milford.
Sherman; village in central part of town of same name	New Milford.

	Names of sheets.
Sherwood; point projecting into Long Island Sound from Westport.	Norwalk.
Shetucket; river tributary to Quinebaug River, formed by Willimantic and Nachaug rivers, which meet in western part of Windham and flow southeast through Sprague, forming boundary between Norwich and Lisbon	Norwich.
Shippan; point projecting from extreme southern coast of Stamford into Long Island Sound	Stamford.
Short Beach; village in southwestern part of Branford, on Long Island Sound	New Haven.
Shunock; river rising in western part of North Stonington, flows southeast into Pawcatuck River	Stonington.
Silvermine; hill in southwestern part of North Stonington; elevation, 340 feet	Stonington.
Silvermine; river, right-hand branch of Norwalk River, in Fairfield County	Norwalk.
Simsbury; town in western part of Hartford County; area, 31 square miles	Granby.
Simsbury; village in eastern part of town of same name	Granby.
Sixmile; brook in southern part of Oxford tributary to Eightmile Brook	Derby.
Skokorat; hill in northern part of Seymour and Bethany; elevation, 420 feet	Derby.
Skungamaug; river tributary to Shetucket River rising in northern part of Tolland, flows south through that town and through Coventry into Andover	Tolland.
Slang; brook flowing into Long Island Sound from Darien	Norwalk.
Smith; cove extending from Niantic River into southeastern coast of East Lyme	New London.
Smith; cove extending from Niantic River into western coast of Waterford	New London.
Smith; cove extending from Thames River into northeastern coast of Waterford	New London.
Smith; cove on southern coast of Greenwich, in Long Island Sound..	Stamford.
Smith; pond in northern part of Watertown	Waterbury.
Snake Rock; hill in northeastern part of New Haven; elevation, 200 feet	New Haven.
Snow; hill in Ashford; elevation, 1,213 feet	Woodstock.
Soapstone; mountain in Somers and Ellington; altitude, 1,061 feet.	Tolland.
Sodom; village in northern part of North Canaan, on Konkapot River	Sheffield.
Sodom; brook in western part of Meriden, tributary to Quinnipiac River	Meriden.
Somers; town in northwestern part of Tolland County; area, 28 square miles.	Springfield. Hartford. Palmer. Tolland.
Somers; village in central part of town of same name	Tolland.
Somerville; village in western part of Somers, on Scantic River	Tolland.
Sound Beach; village in southeastern part of Greenwich, on New York, New Haven and Hartford R. R	Stamford.
South; mountain in southern part of Bristol; altitude, 1,020 feet	Meriden.
South; mountain extending from southwestern part of Berlin into Meriden; altitude, 790 feet	Meriden.
South; pond in northwestern part of Salisbury	Sheffield.

	Names of sheets.
South; cove from Connecticut River indenting southeastern coast of Old Saybrook	Saybrook.
South; cove from Connecticut River indenting southeastern coast of Essex	Saybrook.
South Branch; river tributary to Harbor Brook, in eastern part of Meriden	Meriden.
South Britain; village in west central part of Southbury, on Pomperaug River.	Derby. Danbury.
South Canaan; village in western part of Canaan	Cornwall.
South Coventry; principal village in Coventry, located in southeastern part of the town, on Wamgumbaug Lake	Tolland.
South End; point projecting from southern part of East Haven into Long Island Sound	New Haven
South Farms; village in northern part of Middletown	Middletown
South Glastonbury; village in southwestern part of Glastonbury, on Roaring Brook	Middletown
South Kent; village in southwestern part of Kent, on Housatonic R. R	New Milford
South Killingly; village in southeastern part of Killingly	Putnam.
South Lyme; village in southeastern part of Old Lyme	Saybrook.
South Lyme Station; village in southeastern part of Old Lyme, on New York, New Haven and Hartford R. R	Saybrook.
South Manchester; principal village of Manchester, located on south branch Hockanum River and on New York and New England R. R.	Hartford.
South Meriden; village in southwestern part of Meriden on Quinnipiac River	Meriden.
South Norfolk; village in southern part of Norfolk	Winsted.
South Norwalk; city in Fairfield County, at mouth of Norwalk River on New York, New Haven and Hartford R. R	Norwalk.
South Spectacle; pond in eastern part of Kent	New Milford.
South Weathersfield; village in southeastern part of Wethersfield on New York, New Haven and Hartford R. R	Middletown.
South Willington; village in southwestern part of Willington	Tolland.
South Wilton; village in Wilton	Norwalk.
South Windham; village in southwestern part of Windham, on Shetucket River, also on New London Northern R. R	Norwich.
South Windsor; town in eastern part of Hartford County; area, 30 square miles	Hartford.
South Windsor; village in southwest part of town of same name	Hartford.
South Woodstock; village in southeastern part of Woodstock	Putnam.
Southbury; town in northwestern part of New Haven County; area, 40 square miles.	New Milford Waterbury. Danbury. Derby.
Southbury; village in central part of town of same name	Derby.
Southford; village in southeastern part of Southbury; also on New York and New England R. R	Derby.
Southington; town in southwestern part of Hartford Country; area, 38 square miles	Meriden.
Southington; borough in town of same name on Quinnipiac River; also on New York, New Haven and Hartford R. R	Meriden.
Southington Road Station; village in northeastern part of Cheshire on Meriden and Waterbury R. R	Meriden.
Southport; village in Fairfield	Norwalk.
Spalding; *pond in* southeastern part of North Stonington	Stonington.

	Names of sheets.
Spaulding; pond in eastern part of Norwich	Norwich.
Spectacle; island off southern coast of Branford in Long Island Sound.	New Haven.
Spooner; hill in western part of Kent; elevation, 1,100 feet	New Milford.
Spooner; hill in southwestern part of Kent; elevation, 780 feet	New Milford.
Sprague; town in northern part of New London County; area, 14 square miles	Norwich.
Sprain; brook rising in eastern part of Washington, flows into Pomperaug river in central part of Woodbury.	Waterbury. New Milford.
Spring; hill in Mansfield	Woodstock.
Sprite; island in Long Island Sound, part of Norwalk	Norwalk.
Spruce; brook in southwestern part of Naugatuck tributary to Naugatuck River	Derby.
Spruce; brook in western part of Southbury tributary to Transylvania brook	Danbury.
Spy Rock; hill in northwestern part of Griswold; elevation, 360 feet	Moosup.
Squabble; brook in northern part of Canaan tributary to Konkapot River	Sheffield.
Squantuck; village in southwestern part of Seymour on Housatonic River	Derby.
Squantz; pond in northern part of New Fairfield	New Milford.
Square; pond on southwestern boundary of line of Stafford, being partly in Ellington and partly in Stafford	Tolland.
Square Pond; brook rising in northwestern part of Stafford tributary to Willimantic River	Tolland.
Squaw Rock; island off southern coast of Branford in Long Island Sound	New Haven.
Staddle; hill in western part of Middletown; elevation, 180 feet	Middletown.
Stafford; town in northern part of Tolland County; area, 42 square miles.	Palmer. Brookfield. Tolland. Woodstock.
Stafford; village in eastern part of Stafford on Furnace brook	Tolland.
Stafford Springs; borough in Stafford on Willimantic River, and on New London Northern R. R	Tolland.
Staffordville; village in eastern part of Stafford	Tolland.
Stamford; town in southwestern part of Fairfield County; area, 38 square miles	Stamford.
Stamford; borough in town of same name on Long Island Sound, and also on New York, New Haven and Hartford R. R	Stamford.
Stamford; cove from Long Island Sound indenting southern coast of Stamford	Stamford.
Stanwich; village in northwestern part of Greenwich	Stamford.
State Line; pond in northern part of Stafford	Palmer.
State Line; village in western part of Salisbury on Central New England and Western R. R	Cornwall.
State Prison; village in northeastern part of Wethersfield	Middletown.
Steel; brook rising in northern part of Watertown, flows southeast through Watertown into Naugatuck River in northwestern part of Waterbury	Waterbury.
Stepney; village in southern part of Monroe, on Housatonic River..	Danbury. Derby.
Sterling; town in southeastern part of Windham County; area, 27 square miles.	Putnam. Moosup.

	Names of sheets.
Sterling; village in western part of town of same name	Moosup.
Sterling Station; village in central part of Sterling on Moosup River, also on Providence division New York and New England R. R	Moosup.
Stevenson; village in northeastern part of Monroe on New Haven and Derby R. R	Derby.
Stewart; hill in central part of North Stonington; elevation, 500 feet.	Stonington.
Stickney; hill in Union; elevation, 1,200 feet	Woodstock.
Still; river rises in western part of Danbury, flows northeast through Danbury and Brookfield, into Housatonic River in western part of New Milford.	Danbury. Carmel. New Milford.
Still; river rises in eastern part of Torrington, flows north through that town and Winchester and southeast corner of Colebrook into West Branch of Farmington River in northwest part of Barkhamsted	Winsted.
Still; river rising in southwest part of Woodstock, tributary to Natchaug River	Woodstock.
Stillman; pond in eastern part of Bridgeport	Bridgeport.
Stillmanville; village in eastern part of Stonington on Pawcatuck River	Stonington.
Stillriver; village in southern part of New Milford on Housatonic River	New Milford.
Stoddard; hill in northwestern part of Ledyard; elevation, 200 feet.	New London.
Stone; hill in northeastern part of Griswold; elevation, 500 feet	Moosup.
Stone House; brook in Chaplin tributary to Natchaug River	Woodstock.
Stonington; town in southeastern part of New London County; area, 42 square miles	Stonington.
Stonington; borough in town of same name on Long Island Sound	Stonington.
Stonington; point projecting from southern coast of Stonington into Long Island Sound	Stonington.
Stonington; harbor, arm of Long Island Sound indenting southern coast of Stonington	Stonington.
Stony Creek; village in southeastern part of Branford, on Long Island Sound	New Haven.
Stony; brook rises in northwestern part of Montville, flows southeast into Thames River	New London.
Stony; brook in western part of Waterford tributary to Niantic River.	New London.
Stony; brook rises in western part of Suffield, flows southwest through Suffield into Connecticut River	Hartford.
Stony; brook, right branch of Saugatuck River, in Westport	Norwalk.
Stony; brook in southern part of Stonington, flowing into Stonington Harbor	Stonington.
Storrs; village in northwestern part of Mansfield	Tolland.
Stoughton; brook in western part of South Windsor, branch of Connecticut River	Hartford.
Straitsville; village in southeastern part of Naugatuck	Derby,
Stratford; town in southeastern part of Fairfield County; area, 39 square miles.	Derby. Bridgeport.
Stratford; village in southeastern part of town of same name on Housatonic River, also on New York, New Haven and Hartford R. R	Bridgeport.
Stratford; point projecting from southeastern coast of Stratford into Long Island Sound	Bridgeport.
Strawberry; hill in central part of Durham; elevation, 366 feet	Guilford.
Strongtown; village in northeastern part of Southbury	Derby.
Sturgis Ridge; *hill in Wilton*	Norwalk.

	Names of sheets.
Sucker; brook in western part of East Haddam, tributary to Connecticut River	Saybrook.
Suffield; town in northern part of Hartford County; area, 44 square miles.	Granville. Granby. Springfield. Hartford.
Suffield; village in eastern part of town of same name	Hartford.
Sugar; brook in western part of Plainfield, flows north into Quinebaug River	Moosup.
Sugar Loaf; hill in northwestern part of Guilford; elevation, 514 feet.	Guilford.
Sumac; island off southern coast of Branford in Long Island Sound.	New Haven.
Summit; village in northwestern part of Cheshire	Meriden.
Susquetonscut; brook rising in western part of Franklin, flows south into Yantic River in northeast part of Bozrah	Norwich.
Swantown; hill in western part of North Stonington, having three peaks, altitude of which are 420, 420, and 440 feet, respectively	Stonington.
Sweet; hill in northern part of Lebanon; elevation, 641 feet	Norwich.
Swift Bridge; village in southwestern part of Cornwall, on Housatonic River, also on Housatonic R. R	Cornwall.
Taft Station; village in eastern part of Norwich, on Shetucket River, also on Norwich and Worcester R. R	Norwich.
Taftville; village in northeastern part of Norwich, on Shetucket River.	Norwich.
Talcott; range of mountains extending through towns of East Granby, Simsbury, Bloomfield, Avon, West Hartford, and Farmington	Granby.
Talcottville; village in southwestern part of Vernon, on New York and New England R. R	Tolland.
Tancanhoosen; river rising in western part of Tolland, flows southwesterly through Vernon into Hockanum River	Tolland.
Tanvat; brook in western part of Waterbury, tributary to Welton Brook	Waterbury.
Tariffville; village in northeastern part of Simsbury, on Tunxis or Farmington River, also on New York, New Haven and Hartford R. R., Northampton division	Granby.
Tashua; hill in western part of Trumbull; elevation, 620 feet	Danbury,
Tatetuck; brook in eastern part of Easton, tributary to Mill River.	Danbury.
Tatnic; brook rising in southwestern part of Brooklyn, flows into Blackwell Brook in northeast part of Canterbury	Putnam.
Tatnic; hill in southwestern part of Brooklyn, having two peaks, altitude of each being 540 feet	Putnam.
Taugwank; hill in central part of Stonington; elevation, 180 feet	Stonington.
Taunton; hill in western part of Newtown; elevation, 832 feet	Danbury.
Taunton; pond in western part of Newtown	Danbury.
Taunton Rock; island off southwestern coast of Branford, in Long Island Sound	New Haven.
Tavern; island off coast of Norwalk	Norwalk.
Tenmile; hill in northwestern part of Sherman; elevation, 950 feet.	Clove.
Tenmile; river rising in northeastern part of Prospect, and flowing northeast through northwestern Cheshire into Quinnipiac River, in southern part of Southington	Meriden.
Terryville; village in eastern part of Plymouth, on New York and New England R. R	Meriden.
Terryville; village in eastern part of Plymouth, on Pequabuck River.	Waterbury.

	Names of sheets.
Thames; river formed by two branches, the Quinnebaug and Yantic Rivers. These two rivers meet in southeastern part of Norwich and form the Thames, which flows south, forming boundary between Ledyard, Waterford, and Groton	Norwich.
Thatchbed; island off eastern coast of Essex, in Connecticut River	Saybrook.
Thayer; brook in western part of Kent, tributary to Housatonic River	New Milford.
Thimble; group of islands off southern coast of Branford, in Long Island Sound	New Haven.
Thomaston; town in southeastern part of Litchfield County; area, 12 square miles	Waterbury.
Thomaston; principal village in town of same name, on Naugatuck River, and also on New York, New Haven and Hartford R. R	Waterbury.
Thomasville; village in southeastern part of Norwich, on Thames River, also on New London Northern R. R	Norwich.
Thompson; town in northeastern part of Windham County; area, 50 square miles.	Webster. Putnam.
Thompson; village in south central part of town of same name	Putnam.
Thompson Station; village in south central part of Thompson, on New York and New England R. R	Putnam.
Thompsonville; village in western part of Enfield, on Connecticut River, and on New York, New Haven and Hartford R. R.	Hartford. Springfield.
Three Notches; three small hills in western part of Durham, altitudes of which are 600, 620, and 640 feet, respectively	Guilford.
Titicus; village in central part of Ridgefield	Carmel.
Titicus; mountain in southwestern part of New Fairfield	Carmel.
Titus; mountain in northeastern part of Cornwall; altitude, 1,500 feet	Cornwall.
Toby; mountain in southwestern part of Plymouth; altitude, 893 feet	Waterbury.
Toby Rock; mountain in eastern part of Oxford, extending into Beacon Falls; altitude, 730 feet	Derby.
Tobey; pond in western part of Norfolk	Winsted.
Todd; hill in northwestern part of Bethlehem; elevation, 1,140 feet.	Waterbury.
Todd Hollow; brook rising in central part of Plymouth, flows into Hancock brook	Waterbury.
Toll Bridge; brook in eastern part of Newtown, tributary to Housatonic River	Danbury.
Tolland; town in central part of Tolland County; area, 42 square miles	Tolland.
Tolland; village of town of same name	Tolland.
Tolland Station; village in western part of Willington, on Willimantic River, and on New London Northern R. R	Tolland.
Tôlles; village in southeastern part of Plymouth, on Hancock Brook, and on New York and New England R. R	Waterbury.
Tom; mountain in northwestern part of East Haddam; altitude, 312 feet	Saybrook.
Tom; mountain in Morris and Washington; altitude, 1,325 feet	New Milford
Tom; mountain in central part of New Milford; altitude, 1,100 feet.	New Milford
Tom; mountain in northeastern part of Salisbury, having two peaks.	Sheffield.
Torringford; village in eastern part of Torrington	Winsted.
Torrington; town in central part of Litchfield County; area, 38 square miles	Winsted.

	Names of sheets.
Torrington; borough in town of same name, reached by New York, New Haven and Hartford R. R.	Winsted.
Totoket; village in southwestern part of North Branford	New Haven.
Totoket; mountain in northwestern part of Guilford, greatest elevation being 780 feet	Guilford.
Towantic; village in northeastern part of Oxford, on New York and New England R. R.	Derby.
Towantic; brook in northeastern part of Oxford, tributary to Little River	Derby.
Towantic; hill in northeastern part of Oxford, having two peaks, altitude of each being 700 feet	Derby.
Tower; hill in southeastern part of Killingworth, extending into Saybrook; elevation, 382 feet	Guilford.
Tower; hill in Chaplin; elevation, 500 feet	Woodstock.
Town; hill in eastern part of Warren; elevation, 1,340 feet	New Milford.
Town Farm; brook in southern part of New Milford, tributary to Housatonic River; forms partial boundary between New Milford and Bridgewater	New Milford.
Town Plot; hill in southwestern part of Waterbury; altitude, 668 feet	Waterbury.
Towner; hill in eastern part of Sherman; elevation, 920 feet	New Milford.
Trading; cove extending from Thames River into southeastern coast of Norwich	New London.
Trading Cove; brook forming boundary between Bozrah, Norwich, and Montville, tributary to Thames River	Norwich.
Transylvania; brook rising in southeastern part of Roxbury, flows into Pomperaug River, in central part of Southbury	Danbury.
Trout; brook in central part of Orange, tributary to Indian River	Derby.
Trout; brook in southwestern part of Washington, tributary to Shepaug River	New Milford.
Trout; brook in eastern part of Westbrook, tributary to Patchogue River	Saybrook.
Trout; brook rising in western part of West Hartford, tributary to Connecticut River	Granby.
Trumbull; town in eastern part of Fairfield County; area, 24 square miles.	Danbury. Derby. Bridgeport.
Trumbull; village in southern part of town of same name, on Housatonic R. R.	Bridgeport.
Tunxis River. (*See* Farmington River.)	
Turkey; brook in southern part of Watertown, tributary to Steel Brook	Waterbury.
Turkey; hill in western part of Berlin; elevation, 385 feet	Meriden.
Turkey; hill in southeastern part of Haddam; elevation, 485 feet	Guilford.
Turkey; hill in western part of Orange and Milford; elevation, 140 feet	Derby.
Turner; ridge in Wilton	Norwalk.
Turnerville; village in southeastern part of Hebron, on New York, New Haven and Hartford R. R	Gilead.
Tixis; island off southern coast of Madison, in Long Island Sound	Guilford.
Tweed; island off southern coast of Greenwich, in Long Island Sound.	Stamford.
Twin; two islands in Pocotopaug Lake, in eastern part of Chatham.	Middletown.
Twin; two lakes in northeastern part of Salisbury	Sheffield.

	Names of sheets.
Twin Lakes; village in northeastern part of Salisbury, on Twin Lakes, also on Connecticut Western R. R.	Sheffield.
Twomile; brook rising in eastern Ansonia, flows southwest into Housatonic River, forming partial boundary between Derby and Orange	Derby.
Two Tree; island off southwestern coast of Waterford, in Long Island Sound	New London.
Tylerville; pond in western part of Goshen	Cornwall.
Tylerville; village in southeastern part of Haddam	Saybrook.
Umpawaug; pond in northwestern part of Redding	Danbury.
Umpog; creek rising in eastern part of Danbury, forming boundary between Bethel and Danbury, flowing into Still River in east central part of Danbury	Danbury.
Uncasville; village in southeastern part of Montville	New London.
Union; town in northeastern part of Tolland County; area, 29 square miles.	Brookfield. Woodstock.
Union; village in town of same name	Woodstock.
Union City; village in northern part of Naugatuck, on Naugatuck River and on New York, New Haven and Hartford R. R.	Waterbury.
Unionville; village in northwestern part of Farmington	Granby.
Upper Kohanza; pond in northwestern part of Danbury	Danbury.
Upper Stepney; village in western part of Monroe	Danbury.
Upper White; hill in northern part of Huntington; elevation, 600 feet	Derby.
Utley; hill in Pomfret; elevation, 748 feet	Woodstock.
Valley Forge; village in northeastern part of Weston	Danbury.
Vernon; town in western part of Tolland County; area, 19 square miles.	Tolland. Hartford.
Vernon; village in southwestern part of town of same name	Tolland.
Vernon Center; village in central part of Vernon	Tolland.
Versailles; village in western part of Lisbon, on Shetucket River	Norwich.
Versailles Station; village in western part of Lisbon, on New York and New England R. R., Providence Division	Norwich.
Vinegar; hill in western part of Ledyard; elevation, 365 feet	New London.
Voluntown; town in northeastern part of New London County; area, 41 square miles	Moosup.
Voluntown; village in west central part of town of same name, on Pachaug River	Moosup.
Wachocastinook; creek, rises in western part of Salisbury, flows into Salmon Creek	Sheffield.
Wallingford; town in eastern part of New Haven County; area, 43 square miles.	Meriden. New Haven. Guilford.
Wallingford; borough in central part of town of same name, on Quinnipiac River and on New York, New Haven and Hartford R. R.	New Haven.
Walnut; hill in western part of Madison; elevation, 365 feet	Guilford.
Walnut Tree; hill in eastern part of Southbury; elevation, 790 feet.	Derby.
Walnut Tree; hill in western part of Huntington; elevation, 520 feet.	Derby.
Walkley; hill in northern part of Haddam; elevation, 230 feet	Guilford.
Wamgumbaug; lake in the southeastern part of Coventry	Tolland.
Wamphassuc Neck; strip of land projecting from southern coast of Stonington into Stonington Harbor and into Long Island Sound	Stonington.
Wanzer; hill in southern part of Sherman; elevation, 1,140 feet	New Milford.

	Names of sheets.
Wappaguia; brook in northern part of Pomfret, tributary to Mashammoquet Brook	Putnam.
Wapping; village in southern part of South Windsor	Hartford.
Waramaug; lake on western boundary, between Warren and Washington	New Milford.
Warehouse Point; village in East Windsor, in northwest part, on Connecticut River	Hartford.
Warren; town in western part of Litchfield County; area, 28 square miles.	Cornwall. New Milford.
Warren; village in central part of town of same name	New Milford.
Warrenville; village in Ashford	Woodstock.
Wash; brook in Bloomfield, tributary to Hog River	Hartford.
Washington; town in southern part of Litchfield County; area, 39 square miles	New Milford.
Washington Green; village in south central part of Washington	New Milford.
Washington Station; village in central part of Washington, on Shepaug River, and on Shepaug, Litchfield and Northern R. R	New Milford.
Watchaug; brook rising in Hampden, Mass., flows south into Scantic Brook, in northern part of Somers	Palmer.
Water House; pond in northeastern part of Chester	Saybrook.
Waterbury; town in northern part of New Haven County; area, 29 square miles.	Waterbury. Meriden.
Waterbury; city in central part of town of same name, on Naugatuck River	Waterbury.
Waterford; town in southern part of New London County; area, 39 square miles	New London.
Waterford; village in eastern part of town of same name, on Thames River, and on New London and Northern R. R	New London.
Waterford; island off southwestern coast of Waterford, in Long Island Sound	New London.
Watertown; town in southeastern part of Litchfield County; area, 30 square miles	Waterbury.
Watertown; village in town of same name, on Watertown Branch New York, New Haven and Hartford R. R	Waterbury.
Waterville; village in northern part of Waterbury, on New York and New England R. R	Waterbury.
Wattles; pond in southwestern part of Watertown	Waterbury.
Wauregan; village in northwestern part of Plainfield, on Quinebaug River	Moosup.
Wawecus; hill in southwestern part of Norwich; elevation, 500 feet.	Norwich.
Weatogue; village in southeastern part of Simsbury, on New York, New Haven and Hartford R. R., Northampton Division	Granby.
Webster; point on southeastern coast of Madison, projecting into Long Island Sound	Guilford.
Weekeepeemee; river rising in northwestern part of Bethlehem, flows south through same town into Pomperaug River, in northwestern part of Woodbury	Waterbury.
Welches; point projecting from southern coast of Milford into Long Island Sound	Bridgeport.
Wellsville; village in central part of New Milford, on East Aspetuck River	New Milford.
Welton; brook in western part of Waterbury, tributary to Hop Brook.	Waterbury.
Wepawaug; river rising in northern part of Woodbridge and flowing south through Orange and Milford into Long Island Sound.	Derby. Bridgeport.

	Names of sheets.
Wequetequock; village in southern part of Stonington, on Wequetequock River	Stonington.
Wequetequock; river in southern part of Stonington; flows into Little Narragansett Bay	Stonington.
West; river rising in northwest part of Guilford; flows south into Guilford Harbor, Long Island Sound	Guilford.
West; river rising in Bethany; flows south through Woodbridge and New Haven into New Haven Harbor	New Haven.
West; pond in west central part of Guilford	Guilford.
West Ashford; village in Ashford	Woodstock.
West Aspetuck; river rising in southeastern part of Kent; flows south and joins the East Aspetuck, and together they flow into Housatonic River, in central part of New Milford	New Milford.
West Avon; village in central part of Avon	Granby.
West Cheshire; village in west central part of Cheshire, on Northampton division, New York, New Haven and Hartford R. R.	New Haven. Meriden.
West Cornwall; village in western part of Cornwall, on Housatonic River and on Housatonic R. R	Cornwall.
West Goshen; village in western part of Goshen	Cornwall.
West Granby; village in south central part of Granby	Granby.
West Hartford; town in central part of Hartford County; area, 21 square miles.	Granby. Hartford. Meriden. Middletown.
West Hartford; village in eastern part of town of same name	Hartford.
West Hartland; village in central part of Hartland	Granville.
West Haven; borough in eastern part of Orange, on New Haven Harbor and on New York, New Haven and Hartford R. R	New Haven.
West Norfolk; village in northwestern part of Norfolk	Sandisfield.
West Norwalk; village in western part of town of Norwalk	Norwalk.
West Peak; hill in northwestern part of Meriden; elevation, 1,007 feet	Meriden.
West Pudding; village in northwestern part of Redding on Danbury and Norwalk division of Housatonic R. R	Danbury.
West Rock; ridge of mountains forming boundary between Hampden and Woodbridge, and extending into northwest part of New Haven; greatest elevation, 670 feet	New Haven.
West Rock; hill in northwest part of New Haven; elevation, 405 feet	New Haven.
West Side; pond in western part of Goshen	Cornwall.
West Stafford; village in western part of Stafford on Square Pond Brook	Tolland.
West Stratford; village, part of Bridgeport city, situated on Long Island Sound	Bridgeport.
West Street; village in northern part of Vernon	Tolland.
West Suffield; village in west central part of Suffield	Hartford.
West Sugar Loaf; hill in northwestern part of Guilford; elevation, 480 feet	Guilford.
West Thompson; village in southwestern part of Thompson, on Quinebaug River	Putnam.
West Torrington; village in western part of Torrington on Naugatuck River	Winsted.
West Winsted; village in eastern part of Winchester, on Mad River and on Central New England and Western R. R	Winsted.
***West* Woodstock**; village in Woodstock	Woodstock.

	Names of sheets.
Westbrook; town in southern part of Middlesex County; area, 19 square miles.	Guilford. Saybrook.
Westbrook; village in southern part of town of same name, on Patchogue River and on New York, New Haven and Hartford R. R.	Saybrook.
Westbrook; harbor off southern coast of Westbrook	Saybrook.
Westchester; village in southwestern part of Colchester	Gilead.
Westchester Station; village in northwestern part of Colchester, on New York, New Haven and Hartford R. R	Gilead.
Westcott; cove, arm of Long Island Sound, indenting southern coast of Stamford	Stamford.
Westfield; village in northwestern part of Middletown	Middletown.
Westfield Station; village in western part of Cromwell, on Sebethe River and on Meriden, Waterbury and Connecticut River R. R.	Middletown.
Westford; village in Ashford	Woodstock.
Westford; hill in Ashford; elevation, 957 feet	Woodstock.
Westminster; village in western part of Canterbury	Norwich.
Weston; town in western part of Fairfield County; area, 20 square miles.	Danbury. Norwalk.
Weston; village in town of same name	Norwalk.
Westport; town in southern part of Fairfield County; area, 22 square miles	Norwalk.
Westport; village in town of same name	Norwalk.
Westville; village in western part of New Haven	New Haven.
Wetaug; village in northeastern part of Salisbury	Sheffield.
Wethersfield; town in southern part of Hartford County; area, 14 square miles	Middletown.
Wethersfield; village in eastern part of town of same name, on Valley division New York, New Haven and Hartford R. R	Middletown.
Wewaka; brook rising in central part of Bridgewater; flows south into Housatonic River	New Milford.
Whetstone; brook in Killingly	Putnam.
Whigville; village in southeastern part of Burlington	Meriden.
Whits; pond in eastern part of Goshen	Winsted.
White Deer Rocks; hill in southeastern part of Woodbury; elevation, 736 feet	Waterbury.
White Rocks; several hills in northeastern part of Middletown, one having a height of 500 feet and another about 560 feet	Middletown.
Whiting; river rising in southern part of New Marlboro, Mass.; flows south into Blackberry River in central part of North Canaan	Sheffield.
Whitney; lake in southeastern part of Hamden	New Haven.
Whitneyville; village in Hamden, on boundary between Hamden and New Haven, and on Northampton division New York, New Haven and Hartford R. R	New Haven.
Wig; hill in central part of Chester; elevation, 515 feet	Saybrook.
Williamsville; village in northwestern part of Killingly, on Quinebaug River	Putnam.
Willimantic; borough in western part of Windham, on Willimantic River	Norwich.
Willimantic; river tributary to Shetucket; has its source in northern part of Stafford, flows southerly through Stafford, and forms boundary line between Ellington, Tolland, and Willington, and Coventry and Mansfield	Tolland.
Willington; town in eastern part of Tolland County; area, 35 square miles.	Tolland. Woodstock.

	Names of sheets.
Willington; village in south central part of town of same name	Tolland.
Willow; island in Connecticut River at mouth of Sebethe River	Middletown.
Willow; brook in central part of East Hartford, tributary to Connecticut River	Hartford.
Wilson; village in northeastern part of Hartford, on New York, New Haven and Hartford R. R	Hartford.
Wilson; point projecting into Long Island Sound from Norwalk	Norwalk.
Wilsonville; village in north central part of Thompson, on French River and on New York and New England R. R	Webster.
Wilton; town in western part of Fairfield County; area, 28 square miles.	Danbury. Norwalk.
Wilton; village in town of same name	Norwalk.
Winchester; town in northeastern part of Litchfield County; area, 36 square miles	Winsted.
Winchester; village in southwestern part of town of same name	Winsted.
Windemere; village in southwestern part of Ellington, on Springfield division New York and New England R. R	Tolland.
Windham; town in southwestern part of Windham County; area, 26 square miles	Norwich.
Windham Center; village in central part of Windham	Norwich.
Windsor; town in northern part of Hartford County; area, 31 square miles	Hartford.
Windsor; village in eastern part of town of same name, on New York, New Haven and Hartford R. R., and on Farmington River	Hartford.
Windsor Locks; town in northern part of Hartford County; area, 10 square miles	Hartford.
Windsor Locks; village in eastern part of town of same name, on Connecticut River and on New York, New Haven and Hartford R. R., Hartford Division	Hartford.
Windsorville; village in southeastern part of East Windsor,	Hartford.
Winnipauk; village in Norwalk	Norwalk.
Winsted; borough in east central part of Winchester	Winsted.
Wintechog; hill in western part of North Stonington, having two peaks, altitude of each being 420 feet	Stonington.
Wintergreen; lake in southwestern part of Hamden	New Haven.
Winthrop; village in western part of Saybrook	Saybrook.
Winthrop; cove extending from Thames River into eastern shore New London	New London.
Winthrop; point projecting from New London into Thames River	New London.
Wolcott; town in northern part of New Haven County; area, 21 square miles.	Waterbury. Meriden.
Wolcott; village in central part of town of same name	Meriden.
Womenshenuk; brook rising in southern part of Kent, flows south into Housatonic River, in northwestern part of New Milford	New Milford.
Wononpakok; lake in southwestern part of Salisbury	Cornwall.
Wononscopomus; lake in southwestern part of Salisbury	Cornwall.
Wood; river heading in southwestern part of Sterling, flowing southeast into Rhode Island	Moosup.
Wood; creek in western part of Bethlehem, tributary to Weekepeemee River	Waterbury.
Wood; creek rising in northern part of Danbury, flowing into Rocky River, in eastern part of New Fairfield	Danbury.
Woodbridge; town in western part of New Haven County; area, 21 square miles.	Derby. New Haven.

	Names of sheets.
Woodbridge; village in central part of town of same name	Derby.
Woodbury; town in southern part of Litchfield County; area, 36 square miles.	New Milford. Woodbury.
Woodbury; village in south central part of town of same name	Waterbury.
Woodchuck; hill in southwestern part of Canterbury; elevation, 500 feet	Norwich.
Woodruff; hill in northern part of Oxford, extending into Middlebury; elevation, 880 feet	Derby.
Wooster; brook rising in western part of Waterbury, tributary to Hop Brook	Waterbury.
Wooster; mountain in northern part of Ridgefield; greatest elevation, 1,060 feet	Danbury.
Woodstock; town in northern part of Windham County; area, 62 square miles.	Brookfield. Webster. Woodstock. Putnam.
Woodstock; village in southeastern part of town of same name	Putnam.
Woodstock; pond in southeastern part of Woodstock	Putnam.
Woodstock Valley; village in Woodstock	Woodstock.
Woodville; village in northeastern part of Washington, on West Branch of Shepaug River	New Milford.
Wopopaug. (*See* Wepawaug.)	
Wormwood; hill in Mansfield; elevation, 653 feet	Woodstock.
Worton; brook tributary to Quinnipiac River, forms boundary between Wallingford and North Haven	New Haven.
Wungum; lake in northeastern part of Canaan	Cornwall.
Wyassup; lake in north central part of North Stonington	Stonington.
Yalesville; village in northwestern part of Wallingford, on Quinnipiac River	New Haven.
Yantic; village in western part of Norwich, on Yantic River, and on New London Northern R. R	Norwich.
Yantic; western branch of Thames River, rises in Lebanon and flows southeast through Bozrah into Thames River, in southeastern part of Norwich	Norwich.
Yellow Mill; pond in southeastern part of Bridgeport	Bridgeport.
Zoar Bridge; village in western part of Oxford, on Housatonic River.	Derby.

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DEPARTMENT OF THE INTERIOR

BULLETIN

OF THE

UNITED STATES

GEOLOGICAL SURVEY

No. 118

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

UNITED STATES GEOLOGICAL SURVEY
J. W. POWELL, DIRECTOR

J C Branner

A GEOGRAPHIC DICTIONARY OF NEW JERSEY

BY

HENRY GANNETT

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
U. S. GEOLOGICAL SURVEY, DIVISION OF GEOGRAPHY,
Washington, D. C., May 20, 1894.

SIR: I have the honor to transmit herewith a geographic dictionary of New Jersey.

Very respectfully,

HENRY GANNETT,
Chief Topographer.

Hon. J. W. POWELL,
Director, U. S. Geological Survey.

A GEOGRAPHIC DICTIONARY OF NEW JERSEY.

BY HENRY GANNETT.

The Geographic Dictionary of New Jersey, which constitutes this bulletin, is designed to aid in finding any geographic feature upon the atlas sheets of that State published by the U. S. Geological Survey. It contains all the names given upon those sheets, and no other. Under each name is a brief statement showing the feature it designates and its location, and opposite to it is the name of the atlas sheet, or sheets, upon which it is to be found.

The atlas sheets upon which the State is represented are the result of a survey made in part by the State of New Jersey and in part by the U. S. Geological Survey. The plan of the work, the scale, the contour intervals, the number and variety of the features represented and their mode of representation, and the methods of survey, were designed by the geological survey of New Jersey. About half the area of the State, including the northern part, had been surveyed by that organization when the work was taken up by the U. S. Geological Survey, which carried it forward to completion. Although the southern part of the State was surveyed at the expense of the U. S. Geological Survey, the methods and, in the main, the personnel which had been employed by the State, remained unchanged.

The scale upon which the sheets are published is 1:62500; that is, a distance of 62,500 inches upon the ground, or very nearly 1 mile, is represented by 1 inch upon the map. Relief, or the variation of elevation, is represented by contour lines or lines of equal elevation above mean sea level, these contour lines being at vertical intervals of 10 feet in the low and level portions of the State and 20 feet in the more broken portions. Upon the map all water features, that is, lakes, ponds, rivers, etc., are represented in blue; the contour lines representing the relief, together with the figures showing the elevation, are printed in brown; and the lettering and all symbols representing the works of man are printed in black.

The area of the State is represented upon 49 sheets, each sheet, with one or two exceptions, comprising 15 minutes of latitude by 15 minutes of longitude. Each sheet, therefore, includes about 17 miles from north to south and about 13 miles from east to west. Of these sheets, 32 lie entirely within the State, the remaining 17 including adjacent portions of New York, Pennsylvania, and Delaware. The following is a list of the sheets, showing the names assigned to them and their limits in latitude and longitude:

Sheets.	Limits.			
	In latitude.		In longitude.	
	° ′	° ′	° ′	° ′
Tarrytown	41 00	to 41 15	73 45	to 74 00
Ramapo	41 00	41 15	74 00	74 15
Greenwood Lake	41 00	41 15	74 15	74 30
Franklin	41 00	44 15	74 30	74 45
Wallpack	41 00	41 15	74 45	75 00
Bushkill Falls	41 00	41 15	75 00	75 15
Harlem	40 45	41 00	73 45	75 00
Paterson	40 45	41 00	74 00	74 15
Morristown	40 45	41 00	74 15	74 30
Lake Hopatcong	40 45	41 00	74 30	74 45
Hackettstown	40 45	41 00	74 45	75 00
Delaware Water Gap	40 45	41 00	75 00	75 15
Staten Island	40 30	40 45	74 00	74 15
Plainfield	40 30	40 45	74 15	74 30
Somerville	40 30	40 45	74 30	74 45
High Bridge	40 30	40 45	74 45	75 00
Easton	40 30	40 45	75 00	75 15
Sandy Hook	40 15	40 30	74 00	74 15
New Brunswick	40 15	40 30	74 15	74 30
Princeton	40 15	40 30	74 30	74 45
Lambertville	40 15	40 30	74 45	75 00
Doylestown	40 15	40 30	75 00	75 15
Asbury Park	40 00	40 15	74 00	74 15
Cassville	40 00	40 15	74 15	74 30
Bordentown	40 00	40 15	74 30	74 45
Burlington	40 00	40 15	74 45	75 00
Germantown	40 00	40 15	75 00	75 15
Barnegat	39 45	40 00	74 00	74 15
Whiting	39 45	40 00	74 15	74 30
Pemberton	39 45	40 00	74 30	74 45
Mount Holly	39 45	40 00	74 45	75 00
Philadelphia	39 45	40 00	75 00	75 15
Long Beach	39 30	39 45	74 00	74 15
Little Egg Harbor	39 30	39 45	74 15	74 30
Mullica	39 30	39 45	74 30	74 45
Hammonton	39 30	39 45	74 45	75 00
Glassboro	39 30	39 45	75 00	75 15
Salem	39 30	39 45	75 15	75 30
Wilmington	39 30	39 45	75 30	75 45
Atlantic City	39 15	39 30	74 15	74 30
Great Egg Harbor	39 15	39 30	74 30	74 45
Tuckahoe	39 15	39 30	74 45	75 00

Sheets.	Limits.									
	In latitude.					In longitude.				
	°	′		°	′	°	′		°	′
Bridgeton	39	15	to	39	30	75	00	to	75	15
Bayside	39	15		39	30	75	15		75	30
Smyrna	39	15		39	30	75	30		75	45
Sea Isle	39	00		39	15	74	30		74	45
Dennisville	39	00		39	15	74	45		75	00
Maurice Cove	39	00		39	15	75	00		75	15
Cape May	38	45		39	00	74	45		75	00

New Jersey is one of the original 13 States; it adopted the Constitution on December 18, 1787.

The boundary line between New Jersey and New York is theoretically an arc of a great circle running from the point of junction of Navesink River with Delaware River to a rock on the west side of Hudson River in latitude 41°. This line as run conforms closely to the statute. The boundary between New Jersey and Pennsylvania is the main channel of the Delaware River.

The total area of New Jersey is, excluding the waters of Delaware Bay, 7,815 square miles. Of this an area estimated at 290 square miles is water surface, leaving as the land surface of the State 7,525 square miles. Of the land surface, 43 per cent is in forests and 6 per cent in tide marsh, leaving a trifle over one-half as cleared land.

The State contains 21 counties, which, with their land areas, are as follows:

County.	Square miles.
Atlantic	567
Bergen	236
Burlington	869
Camden	222
Cape May	256
Cumberland	511
Essex	127
Gloucester	326
Hudson	43
Hunterdon	437
Mercer	226
Middlesex	312
Monmouth	479
Morris	475
Ocean	583
Passaic	198
Salem	359
Somerset	305
Sussex	529
Union	103
Warren	362

• A GEOGRAPHIC DICTIONARY OF NEW JERSEY.

	Names of sheets.
Abbot; creek in Fairfield Township, Cumberland County, tributary to Back Creek	Bayside.
Absecon; light-house on coast of Egg Harbor Township, Atlantic County	Atlantic City.
Absecon; life-saving station on Absecon Beach	Atlantic City.
Absecon; inlet on coast reef on boundary between Galloway and Egg Harbor townships, Atlantic County	Atlantic City.
Absecon; bay in coast swamp of Galloway and Egg Harbor townships, Atlantic County	Atlantic City.
Absecon; creek rising in south part of Galloway Township, Atlantic County, flowing southeast into Absecon Bay.	Atlantic City. Great Egg Harbor.
Absecon; beach on coast of Egg Harbor Township, Atlantic County.	Great Egg Harbor. Atlantic City.
Absecon; town in north part of Egg Harbor Township, Atlantic County, in Absecon Creek	Great Egg Harbor.
Aoquackanonck; township in Passaic County; area, 11 square miles	Paterson.
Acton; village in Mannington Township, Salem County, on West Jersey R. R	Salem.
Africa; village in Manalapan Township, Monmouth County.	Cassville.
Afton; village in north part of Chatham Township, Morris County	Morristown.
Albertson; brook in Waterford Township, Camden County, and Hammonton Township, Atlantic County, tributary to Nescochaque Creek.	Hammonton. Mullica.
Albion; village in Gloucester Township, Camden County, on Philadelphia and Atlantic R. R	Mount Holly.
Aldine; village in Alloway Township, Salem County	Salem.
Alexandria; township in Hunterdon County; area, 27 square miles.	High bridge. Easton.
Alexsocken; creek tributary to Delaware River; rises in Delaware Township and forms partial boundary between Delaware and West Amwell townships, Hunterdon County.	Lambertville.
Allaire; village in Wall Township, Monmouth County, on Freehold and Jamesburg R. R	Asbury Park.
Allamuchy; township in Warren County; area, 21 square miles	Hackettstown.
Allamuchy; village in east central part of Allamuchy Township, Warren County	Hackettstown.
Allamuchy; station on Lehigh and Hudson River R. R., in Allamuchy Township, Warren County	Hackettstown.
Allamuchy; pond in central part of Allamuchy Township, Warren County	Hackettstown.

	Names of sheets.
Allen; village in East Windsor Township, Mercer County, on Amboy Division, Pennsylvania R. R.	Bordentown.
Allendale; village in western part of Orvil Township, Bergen County, on New York, Lake Erie and Western R. R.	Ramapo.
Allentown; village in Upper Freehold Township, Monmouth County	Bordentown.
Allenwood; village in Wall Township, Monmouth County, on Freehold and Jamesburg R. R.	Asbury Park.
Allerville; village in western part of Clinton Township, Hunterdon County	High Bridge.
Alligator, The; village in Jackson Township, Ocean County.	Cassville.
Allimatona; falls in Lamington River, at the point where Morris, Hunterdon, and Somerset counties join	Somerville.
Alloway; township in Salem County; area, 34 square miles.	Glassboro. Salem.
Alloway; station in Alloway Township, Salem County, on West Jersey R. R.	Salem.
Alloway; village in Alloway Township, Salem County	Salem.
Alloway; creek rising in Upper Pittsgrove Township, Salem County, flows southwest through Salem County into Delaware River	Salem.
Almonesson; village in east part of Deptford Township, Gloucester County	Philadelphia.
Almonesson; creek in Deptford Township, Gloucester County; tributary to Big Timber Creek	Philadelphia.
Alpine; village in southeastern part of Harrington Township, Bergen County	Harlem.
Alquatka Branch; brook in Evesham and Medford townships, Burlington County, flows into Mullica River	Mount Holly.
Ambrose; brook in Raritan and Piscataway townships, Middlesex County; tributary to Raritan River.	Plainfield. Somerville.
Amsterdam; village in western part of Holland Township, Hunterdon County	Easton.
Amwell; village in eastern part of East Amwell Township, Hunterdon County	Lambertville.
Anchoring; islands in New Inlet in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Ancora; village in Winslow Township, Camden County, on Camden and Atlantic R. R	Hammonton.
Anderson; village in southern part of Mansfield Township, Warren County	Hackettstown.
Andover; township in Sussex County; area, 25 square miles	Wallpack. Hackettstown. Lake Hopatcong. Franklin.
Andover; village in southern part of Andover Township, Sussex County, on Sussex R. R	Lake Hoptacong.
Andover; village in Winslow Township, Camden County, on Philadelphia and Reading R. R	Hammonton.
Anglesea; borough on southeast coast of Cape May County.	Dennisville.
Anglesea Junction; village in Middle Township, Cape May County, at junction of Anglesea and West Jersey railroads	Dennisville.
Annandale; village in northwest part of Clinton Township, Hunterdon County, on Central R. R. of New Jersey	High Bridge.

	Names of sheets.
Annaricken; brook in Springfield Township, Burlington County; flows into Assicunk Creek	Bordentown.
Anthonystown; village in Eatontown Township, Monmouth County	Sandy Hook.
Apple Pie; hill in Woodland Township, Burlington County; elevation, 208 feet	Pemberton.
Applegate; cove projecting from Barnegat Bay into Dover Township, Ocean County	Barnegat.
Apgars Corner; village in southern part of Tewksbury Township, Hunterdon County	High Bridge.
Archertown; village in Plumstead Township, Ocean County.	Cassville.
Arcola; village in eastern part of Saddle River Township, Bergen County	Paterson.
Arlington; village in northwestern part of Kearney Township, Hudson County, on Passaic River and on Orange Branch of New York and Greenwood Lake R. R.	Paterson.
Arney Mount; village in Springfield Township, Burlington County	Bordentown.
Arneytown; village in New Hanover Township, Burlington County	Bordentown.
Arnold; point projecting from Lower Alloways Creek Township, Salem County, into Delaware River	Bayside.
Arnold Branch; brook in Bass River Township, Burlington County, flows into Wading River.	Little Egg Harbor. Mullica.
Asbury; village in southeastern part of Franklin Township, Warren County, and extending over into Bethlehem Township, Hunterdon County, on Musconetcong River	Easton.
Asbury; station on West Jersey R. R., in Woolwich Township, Gloucester County	Chester.
Asbury Park; borough and summer resort in Monmouth County, on New York and Long Branch R. R.	Asbury Park.
Ash; swamp in south part of Fanwood Township, Union County	Plainfield.
Ash Lane Station; village in Delaware Township, Camden County, on Camden and Atlantic R. R.	Philadelphia.
Aserdaten; village in Lacey Township, Ocean County	Whitings.
Assanpink; creek rising in Monmouth County, flows through Mercer County, and enters Delaware River at Trenton.	Bordentown. Princeton.
Assiscunk; creek flowing northwest across Burlington County into Delaware River	Burlington.
Asylum; station in Ewing Township, Mercer County, on Belvidere division, Pennsylvania R. R	Burlington.
Asylum Station; village in central part of Ewing Township, Mercer County, on Trenton branch of New York Division, Philadelphia and Reading R. R	Lambertville.
Atco; village in Waterford Township, Camden County, on Camden and Atlantic R. R	Mount Holly.
Athenia; village in central part of Acquackanonck Township, Passaic County, on Boonton branch of Delaware and Western R. R., and on Paterson and Newark branch of New York, Lake Erie, and Western R. R	Paterson.
Atlantic; township in Monmouth County; area, 32 square miles	Sandy Hook.

	Names of sheets.
Atlantic; county in southeastern part of New Jersey; area, 613 square miles.	Hammonton. Tuckahoe. Mullica. Great Egg Harbor. Little Egg Harbor. Atlantic City.
Atlantic; city on the coast of Egg Harbor Township, Atlantic County	Atlantic City.
Atlantic City; life-saving station at Atlantic City	Atlantic City.
Atlantic Highlands; village in Middletown Township, Monmouth County, on Atlantic Highlands branch of New Jersey Southern R. R	Sandy Hook.
Atsion: village in Shamong Township, Burlington County, on Mullica River and on New Jersey Southern R. R.	Mullica.
Auburn; village in Oldmans Township, Salem County	Salem.
Augusta; village in southern part of Frankford Township, Sussex County, on Paulins Kill and on Sussex R. R	Franklin.
Aura; village in Clayton Township, Gloucester County.	Glassboro.
Avalon; village in Middle Township, Cape May County	Sea Isle.
Avenel; village in central part of Woodbridge Township, Middlesex County, on Perth Amboy branch Pennsylvania R. R	Plainfield.
Avis Mills; village in Pilesgrove Township, Salem County	Salem.
Avon Park; village in northeastern part of Piscataway Township, Middlesex County	Plainfield.
Avondale; village in Franklin Township, Essex County, on Paterson and Newark branch of New York, Lake Erie and Western R. R	Paterson.
Babcock; creek rising in Galloway Township, Atlantic County, flows southwest across Hamilton Township in same county into Great Egg Harbor River.	Mullica. Great Egg Harbor.
Back; creek rising in Fairfield Township, flows south, forming boundary between Fairfield and Lawrence townships, Cumberland County, into Delaware River	Bayside.
Back; brook in East Amwell Township, Hunterdon County, tributary to Neshanic River	Lambertville.
Back Neck; peninsula in coast swamp in Fairfield Township, Cumberland County	Bayside.
Back Run; stream in Upper Township, Cape May County, tributary to Tuckahoe River	Tuckahoe.
Back Thorofare; passage in coast swamp in Upper Township, Cape May County	Great Egg Harbor.
Bacon Neck; peninsula in coast swamp in Greenwich Township, Cumberland County	Bayside.
Bacon Run; brook on boundary between Chesterfield and Mansfield townships, Burlington County, tributary to Black Creek	Bordentown.
Bailey Corners; village in Wall Township, Monmouth County	Asbury Park.
Baileytown; village in Commercial Township, Cumberland County	Bridgeton.
Baker Basin; village in Lawrence Township, Mercer County, on Delaware and Raritan Canal	Princeton.
Bakersville; village in Egg Harbor Township, Atlantic County, on West Jersey R. R	Great Egg Harbor.

	Names of sheets.
Baldwin; brook in Hopewell Township, Mercer County, tributary to Stony Brook	Lambertville.
Balesville; village in eastern part of Hampton Township, Sussex County, on Paulins Kill	Wallpack.
Ballanger; creek rising in Little Egg Harbor Township, Burlington County, flows southwest on boundary between Little Egg Harbor and Bass River townships, into Mullica River	Little Egg Harbo
Ballinger Mill; village in Medford Township, Burlington County	Mount Holly.
Bamber; village in Lacey Township, Ocean County	Whitings.
Banard; station in Buena Vista Township, Atlantic County, on Philadelphia and Reading R. R	Hammonton.
Bank; creek in north part of Upper Township, Cape May County, tributary to Hughes Creek	Great Egg Harbor
Baptisttown; village in northern part of Kingswood Township, Hunterdon County	Easton.
Barbertown; village in central part of Kingswood Township, Hunterdon County	Doylestown.
Barckley; brook in Marlboro Township, Monmouth County, and Madison Township, Middlesex County, flows into Matchaponix Brook	New Brunswick.
Bard Branch; brook in Shamong Township, Burlington County, tributary to Springer Creek	Pemberton.
Bargaintown; village in Central part of Egg Harbor Township, Atlantic County, on Patcong Creek	Great Egg Harbo
Barker; brook in Springfield and Easthampton townships, Burlington County, flows into Assiscunk Creek.	Bordentown. Burlington.
Barley Sheaf; village in southwestern part of Readington Township, Hunterdon County	High Bridge.
Barnegat; village in Union Township, Ocean County, on Tuckerton and New Jersey Southern R. R	Barnegat.
Barnegat; city on coast of Ocean Township, Ocean County.	Barnegat.
Barnegat; inlet projecting from Atlantic Ocean into Ocean Township, Ocean County	Barnegat.
Barnegat; life-saving station on coast of Ocean Township, Ocean County	Barnegat.
Barnegat; light-house on coast of Ocean Township, Ocean County	Barnegat.
Barnegat Park; village in Berkeley Township, Ocean County.	Barnegat.
Barnegat Pier; point on coast of Berkeley Township, Ocean County	Barnegat.
Barnsboro; village in Mantua Township, Gloucester County.	Philadelphia.
Barrel; islands in Little Egg Harbor, in Little Egg Harbor Township, Burlington County	Little Egg Harbo
Barrentown; village in Atlantic Township, Monmouth County	Sandy Hook.
Barret Run; brook in Hopewell Township, Cumberland County, flows into Cohansey Creek.	Bayside. Bridgeton.
Bartley; village in southern part of Mount Olive Township, Morris County, on High Bridge branch of Central R. R. of New Jersey	Lake Hopatcong.
Barton Run; brook in Waterford Township, Camden County, and Evesham and Medford townships, Burlington County, flows into southwest branch of Rancocas Creek	Mount Holly.

	Names of sheets.
Basking Ridge; village in eastern part of Bernard Township, Somerset County, on Passaic and Delaware branch of Delaware, Lackawanna and Western R. R	Somerville.
Bass; river heading in two branches, the East branch and West branch, in Bass River Township, Burlington County, flows into Mullica River	Little Egg Harbor.
Bass River; village in Bass River Township, Burlington County	Little Egg Harbor.
Bass River; township in Burlington County; area, 80 square miles.	Mullica. Whitings. Little Egg Harbor.
Battentown; village in Woolwich Township, Gloucester County, on West Jersey R. R	Salem.
Batsto; river in Woodland, Shamong, and Washington townships, Burlington County, tributary to Mullica River	Pemberton.
Batsto; village in Washington Township, Burlington County, on Batsto River	Mullica.
Bay Head; village in Brick Township, Ocean County, on Philadelphia and Long Branch R. R	Asbury Park.
Bay Head; life-saving station on reef in Brick Township, Ocean County	Asbury Park.
Bay Shore; life-saving station on southwest shore of Lower Township, Cape May County	Cape May.
Bayside; beacon on coast of Middletown Township, Monmouth County	Sandy Hook.
Bayside; village in Greenwich Township, Cumberland County, on New Jersey Southern R. R	Bayside.
Bayonne; city in Hudson County; area, 12 square miles	Staten Island.
Bayview Avenue; seacoast village in Middletown Township, Monmouth County	Sandy Hook.
Bayville; village in Berkeley Township, Ocean County	Barnegat.
Bayway; village in Elizabeth City, Union County, where Baltimore and New York R. R. crosses New York and Long Branch R. R	Staten Island.
Beach; creek in northeast part of Dennis Township, Cape May County, flowing southwest into Ludlam Thorofare	Sea Isle.
Beach; creek in southeast part of Middle Township, Cape May County, flows north into Hereford Inlet	Dennisville.
Beach Creek; passage in coast swamp in Upper Township, Cape May County	Sea Isle.
Beach Glen; village in central part of Rockaway Township, on Hibernia Brook and Hibernia Mine R. R., Morris County	Morristown.
Beach Haven; village on beach in Englewood Township, Ocean County, on Long Beach R. R	Long Beach.
Beach Thorofare; passage in coast swamp in Egg Harbor Township, Atlantic County.	Atlantic City. Great Egg Harbor.
Beacon; hill among Mount Pleasant Hills, in Marlboro Township, Monmouth County; elevation, 386 feet	Sandy Hook.
Beacon; hill in Brick Township, Ocean County; elevation, 138 feet	Asbury Park.
Beacon; creek in Downe Township, Cumberland County, flows into Delaware River	Bridgeton.
Beadon; point projecting from Downe Township, Cumberland County, into Delaware Bay	Maurice Cove.

	Names of sheets.
Bear; book rising in East Windsor Township, flows northwest into Millstone River, in north part of West Windsor Township, Mercer County.	Princeton.
Bear; brook in Orvil and Washington Townships, Bergen County, tributary to Pascack Creek	Ramapo.
Bear; creek rising in Stillwater and Green townships, Sussex County, it flows southwest into Warren County, entering Pequest River.	Wallpack. Hackettstown.
Bear; islands in Manahawken Bay, in Stafford Township, Ocean County	Long Beach.
Bear; two small ponds in eastern part of Byram Township, Sussex County	Lake Hopatcong.
Bear; swamp in Downe Township, Cumberland County	Bridgeton.
Bear; swamp in northwest part of West Windsor Township, Mercer County, along Duck Pond Run	Princeton.
Bear; swamp in Southampton and Medford townships, Burlington County.	Pemberton. Mount Holly.
Bear; swamp in northern part of Hampton Township, extending over the boundary into Frankford Township, Sussex County	Wallpack.
Bear Branch; brook in Landis Township, Cumberland County	Tuckahoe.
Bear Swamp; creek in Lawrence Township, Cumberland County, flows into Back Creek.	Bridgeton. Bayside.
Bear Swamp; hill in Randolph Township, Burlington County; elevation, 165 feet	Whitings.
Bear Swamp; river in Southampton Township, Burlington County, tributary to Little Creek.	Pemberton. Mount Holly.
Bear Swamp; brook in Howell Township, Monmouth County, flows into Manasquan River	Asbury Park.
Bear's Head Branch; brook in Landis Township, Cumberland County, flows into Manumuskin River	Tuckahoe.
Bearport; mountain range extending through West Milford Township, Passaic County, into Orange County, N. Y.	Greenwood Lake.
Beattystown; village in eastern part of Mansfield Township, Warren County, on Musconetcong River	Hackettstown.
Beaver; brook in Center Township, Camden County, tributary to Big Timber Creek	Philadelphia.
Beaver; brook in Warren County, tributary to Pequest River	Hackettstown. Delaware Water Gap.
Beaver; brook in Morris County, tributary to Rockaway River	Morristown.
Beaver; brook in Morris County, tributary to Weldon Brook.	Lake Hopatcong.
Beaver; creek in Oldmans Township, Salem County, flows into Delaware River	Salem.
Beaver Branch; brook in Maurice River Township, Cumberland County, tributary to Clear Run	Tuckahoe.
Beaver Branch; brook in Burlington County; tributary to Wading River.	Little Egg Harbor. Mullica.
Beaverdam; village in Downe Township, Cumberland County.	Bridgeton.
Beaverdam; brook in East Brunswick Township, Middlesex County, tributary to Lawrence Brook.	New Brunswick.
Beaverdam; river in Southampton Township, Burlington County.	Pemberton. Mount Holly.

	Names of sheets.
Beaver Run; village in northwest part of Hardiston Township, Sussex County	Franklin.
Beaverville; village in Southampton Township, Burlington County, on Beaverdam River	Pemberton.
Beden; brook rising in Hopewell Township, Mercer County, flows through Montgomery Township, Somerset County, into Millstone River.	Princeton. Lambertville.
Bedminster; village in eastern part of Bedminster Township, Somerset County, on north branch of Raritan River	Somerville.
Bedminster; township in Somerset County; area, 27 square miles	Somerville.
Bee; branch of Mantua Creek in Washington Township, Gloucester County	Philadelphia.
Beebe Run; brook in Hopewell Township, Cumberland County, flows into Cohansey Creek	Bayside.
Beemerville; village in southwestern part of Wantage Township, Sussex County	Franklin.
Beesley; point projecting into Great Egg Harbor in Upper Township, Cape May County	Great Egg Harbor.
Beideman Station; village in Stockton Township, Camden County, on Pennsylvania R. R	Philadelphia.
Belle Mead; village in north part of Montgomery Township, Somerset County, on Philadelphia and Reading R. R	Princeton.
Belleplain; village in Maurice River Township, Cumberland County, on West Jersey R. R	Tuckahoe.
Belleville; township in Essex County; area, 3 square miles	Paterson.
Belleville; city in Belleville Township, Essex County, at junction of Second River with Passaic River, and on Paterson and Newark Branch of New York, Lake Erie and Western R. R	Paterson.
Bellman; creek in Ridgefield Township, Bergen County, tributary to Hackensack River.	Paterson. Harlem.
Belvidere; town, capital of Warren County, is on Delaware River, at mouth of Pequest River, on Belvidere Division of Pennsylvania R. R. and on Lehigh and Hudson River R. R	Delaware Water Gap.
Ben Davis; point projecting from Pier Point Neck, in Fairfield Township, Cumberland County, into Delaware River.	Bayside.
Ben Elder; creek in Upper Township, Cape May County, flows into Peck Bay	Great Egg Harbor.
Ben Hands Thorofare; passage in coast swamp in Upper Township, Cape May County	Sea Isle.
Bennett; village in central part of Lower Township, Cape May County, on West Jersey R. R	Cape May.
Bennett Mill; village in Maurice River Township, Cumberland County	Tuckahoe.
Bennett Mills; village in Jackson Township, Ocean County, on Meterdeconk River	Cassville.
Bergen; county in northeast part of the State; area, 245 square miles.	Morristown. Greenwood Lake. Ramapo. Paterson. Harlem. Tarrytown.

	Names of sheets.
Bergen; southern point of Bayonne City on Kill Van Kull and Newark Bay	Staten Island.
Bergen Fields; village in Palisade Township, Bergen County, on West Shore R. R	Harlem.
Bergen Mills; village in Millstone Township, Monmouth County, on Millstone River	New Brunswick.
Berkeley; township in Ocean County; area, 59 square miles.	Whitings. Asbury Park. Barnegat.
Berkeley; village in East Greenwich Township, Gloucester County, on West Jersey R. R. and on Mantua Creek	Philadelphia.
Berkeley Heights; village in New Providence Township, Union County, on Passaic River and on Passaic and Delaware R. R	Plainfield.
Berkshire Valley; village in Jefferson Township, Morris County, on Rockaway River	Lake Hopatcong.
Berlin; village in Winslow Township, Camden County, on Camden and Atlantic R. R.	Mount Holly.
Bernard; township in Somerset County; area, 41 square miles.	Lake Hopatcong. Somerville.
Bernardsville; village in Bernard Township, Somerset County, at east end of Passaic and Delaware Branch of Delaware, Lackawanna and Western R. R	Somerville.
Berry; creek rising in Lodi Township, flows through Boiling Springs Township, and empties into Hackensack River in Union Township, Bergen County	Paterson.
Berry Chapel; village in Quinton Township, Salem County.	Salem.
Berryland; village in Monroe Township, Gloucester County.	Hammonton.
Berryman Run; brook in Landis and Millville Townships, Cumberland County, flows into Manantico Creek.	Bridgeton. Tuckahoe.
Bertrand; island off northern coast of Roxbury Township, Morris County, in Lake Hopatcong	Lake Hopatcong.
Bethany Hole Run; brook in Evesham and Medford Townships, Burlington County, tributary to Haynes Creek	Mount Holly.
Bethel; village in Egg Harbor Township, Atlantic County, on West Jersey R. R	Great Egg Harbor.
Bethel; village in Howell Township, Monmouth County	Asbury Park.
Bethel; run in Washington Township, Gloucester County, tributary to Mantua Creek	Philadelphia.
Bethel; village in Stockton Township, Camden County	Philadelphia.
Bethlehem; township in Hunterdon County; area, 24 square miles.	Easton. High Bridge.
Bevans; post-office of Peters Valley, in western part of Sandyston Township, Sussex County	Wallpack.
Beverly; village in Beverly Township, Burlington County, on Delaware River and on Amboy Division, Pennsylvania R. R.	Burlington.
Beverly; township in Burlington County; area, 6 square miles.	Burlington.
Biddle Branch; brook in Woodland Township, Burlington County, tributary to Shoal Branch	Whitings.
Big; brook in Marlboro and Atlantic Townships, Monmouth County, tributary to Hop Brook	Sandy Hook.
Big; cove, an arm of Lake Hopatcong, indenting the western coast of Roxbury and Jefferson Townships, Morris County.	Lake Hopatcong.
Big Bridge Branch; brook in Monroe Township, Gloucester County, flows into Great Egg Harbor River	Hammonton.

	Names of sheets.
Big Flat; brook in Sandyston Township, Sussex County, eastern tributary to Flat Brook	Wallpack.
Big Mannington Hill; village in Mannington Township, Salem County	Salem.
Big Neal Branch; brook in Landis Township, Cumberland County, tributary to Manumuskin River	Tuckahoe.
Big Spring; small pond in northeastern part of Green Township, Sussex County	Wallpack.
Big Timber; creek rising in Camden and Gloucester counties. It flows northwest, forming boundary between them, into Delaware River at Gloucester City.	Mount Holly. Philadelphia. Glassboro.
Big Wrangel Branch; brook in Manchester Township, Ocean County, tributary to Wrangel Brook	Whitings.
Billingsport; village in Greenwich Township, Gloucester County, on Delaware River	Philadelphia.
Birmingham; village in Pemberton Township, Burlington County, on Philadelphia and Long Branch R. R	Pemberton.
Birmingham; village in Ewing Township, Mercer County, on New York Division of Philadelphia and Reading R. R.	Lambertville.
Bishop Run; brook in Stow Creek Township, Cumberland County, flows into Horse Run	Bayside.
Black; brook rising in Chatham Township, flows northeast into Whippany River in south part of Hanover Township, Morris County	Morristown.
Black; brook in Bethlehem and Union townships, Hunterdon County, tributary to Mulhockaway Creek	High Bridge.
Black; brook in Chatham and Passaic townships, Morris County, tributary to Passaic River.	Plainfield. Somerville.
Black; creek in New Hanover, Chesterfield, and Bordentown townships; flows into Delaware River	Bordentown.
Black; meadows in Hanover and Chatham townships, Morris County	Morristown.
Black; river in Morris County, forming the headwaters of Lamington River.	Lake Hopatcong. Somerville.
Black Branch; brook in Jackson and Manchester townships, Ocean County, flows into Union Branch of Toms River	Cassville.
Black Mills; village in Manalapan Township, Monmouth County.	Princeton. New Brunswick.
Black Mills; village in Manalapan Township, Monmouth County	Cassville.
Black Tom; island off Jersey City in New York Upper Bay	Staten Island.
Blackberry; creek in Eatontown Township, Monmouth County, flows into Pleasurè Bay	Sandy Hook.
Blackman; swampy island in east part of Upper Township, Cape May County	Sea Isle.
Blackman Branch; brook in Egg Harbor Township, Atlantic County, tributary to Mill Branch of Patcong Creek.	Great Egg Harbor.
Blackwater Branch; brook in Landis Township, Cumberland County, flows into Maurice River	Glassboro.
Blackwood; village in Gloucester Township, Camden County, on South Branch of Timber Creek	Philadelphia.
Blair; creek in Stillwater Township, Sussex County, and Hardwick and Blairstown Townships, Warren County, flows into Paulins Kill.	Wallpack. Hackettstown.

	Names of sheets.
Blairstown; township in Warren County; area, 32 square miles.	Wallpack. Bushkill Falls. Delaware Water Gap. Hackettstown.
Blairstown; village in eastern part of Blairstown Township, Warren County, on Paulins Kill, and on New York, Susquehanna and Western R. R.	Hackettstown.
Bloomfield; township in Essex County; area, 7 square miles.	Paterson.
Bloomfield; village in Bloomfield Township, Essex County, on Morris Canal, on Second River, and on New York and Greenwood Lake R. R., and Bloomfield Branch of Delaware, Lackawanna and Western R. R.	Paterson.
Bloomingdale; village in south part of Pompton Township, Passaic County, on Pequonnock River, and on New York, Susquehanna and Western R. R.	Greenwood Lake.
Bloomington; borough in northern part of Somerset County, on Raritan R. R., and on Delaware and Raritan Canal	Somerville.
Bloombury; village in Bethlehem Township, Hunterdon County, on Musconetcong River, on New Jersey Central R. R., and Lehigh Valley R. R.	Easton.
Blowenburg; village in Montgomery Township, Somerset County	Princeton.
Blue; brook in Union County, tributary to Green Brook	Plainfield.
Blue Anchor; village in Winslow Township, Camden County	Hammonton.
Blue Anchor Branch; brook in Winslow and Waterford townships, Camden County, tributary to Albertson Brook	Hammonton.
Blue Bell; village in Franklin Township, Gloucester County	Hammonton.
Bluefish Creek; passage in coast swamp in Middle Township, Cape May County	Dennisville.
Boardville; village in Pompton Township, Passaic County, on Wanaque River, and on Ringwood Branch of New York and Greenwood Lake R. R.	Greenwood Lake.
Bog and Vly; meadows in southeastern part of Pequonnock Township, Morris County	Morristown.
Bogota; village in Ridgefield Township, Bergen County, on Hackensack River, on the New York, Susquehanna and Western R. R., and the West Shore R. R.	Paterson.
Boiling Springs; township in Bergen County; area, 4 square miles	Paterson.
Bond; village in Eagleswood Township, Ocean County, on Atlantic coast	Little Egg Harbor.
Bond; Life Saving Station, on Tucker Beach, Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Bonhamtown; village in Raritan Township, Middlesex County, on Pennsylvania R. R.	Plainfield.
Boonton; township in Morris County; area, 7 square miles	Morristown.
Boonton; city in Boonton and Hanover townships, Morris County, on Rockaway River, on Morris Canal, and on Boonton Branch of Delaware, Lackawanna and Western R. R.	Morristown.
Borden Mill Branch; brook in Plumstead and Jackson townships, Ocean County, flows into Ridgeway Branch	Cassville.
Bordentown; village in Bordentown Township, Burlington County, on Delaware River, and at junction of Pennsylvania R. R. and Trenton Branch R. R., Amboy Division	Bordentown.

	Names of sheets.
Bordentown; township in Burlington County; area, 9 square miles	Bordentown.
Borton; landing in Willingboro Township, Burlington County, on Rancocas Creek	Burlington.
Boos Road; village in Delaware Township, Hunterdon County, on Flemington Branch, Belvidere Division, Pennsylvania R. R.	Lambertville.
Bottle Creek; passage in coast swamp in Dennis Township, Cape May County	Sea Isle.
Bound; creek rising in Clinton Township, Essex County, forms boundary between Clinton Township and Newark City and flows into Newark Bay	Staten Island.
Bound; brook in Raritan and Piscataway Townships, Middlesex County, tributary to Green Brook.	Somerville. Plainfield.
Bound Brook; borough in Somerset County, at junction of Green Brook with Raritan River, on Central R. R. of New Jersey, and on Lehigh Valley R. R.	Somerville.
Bowentown; village in Hopewell Township, Cumberland County, on New Jersey Southern R. R.	Bayside.
Bower; creek in Lawrence Township, Cumberland County, flows into Cedar Creek	Bridgeton.
Bowne; village in Delaware Township, Hunterdon County, on Flemington Branch, Belvidere Division, Pennsylvania R. R	Lambertville.
Boyds Hotel; village in Manchester Township, Ocean County	Whitings.
Braddock; village in Winslow Township, Camden County	Hammonton.
Braddock; island in north part of Great Egg Harbor, in Upper Township, Cape May County	Great Egg Harbor.
Braddock Mill; village in Medford Township, Burlington County, on Kettle Run	Mount Holly.
Bradevelt; village in Marlboro Township, Monmouth County, on Freehold and New York R. R.	Sandy Hook.
Bradway; station on New Jersey Southern R. R., in Pittsgrove Township, Salem County.	Bridgeton.
Branch Mills; village in Westfield Township, Union County.	Plainfield.
Branchburg; village in Eatontown Township, Monmouth County	Sandy Hook.
Branchburg; township in Somerset County; area, 20 square miles.	High Bridge. Somerville.
Branchport; village in Eatontown Township, Monmouth County, on New Jersey Southern R. R. and on Central R. R. of New Jersey	Sandy Hook.
Branchville; village in Frankford Township, Sussex County, on Sussex R. R.	Franklin.
Branchville Junction; village in Lafayette Township, at junction of Sussex R. R. and New York, Susquehanna and Western R. R., Sussex County	Franklin.
Brass Castle; village in Washington Township, Warren County	Delaware Water Ga
Bread and Cheese Run; brook in Shamong Township, Burlington County, flows into Friendship Creek	Pemberton.
Breeches Branch; brook in Randolph Township, Burlington County, flows into Oswego River.	Whitings. Little Egg Harbor.

	Names of sheets.
Brick; township in Ocean County; area, 62 square miles	Asbury Park. Cassville.
Brick Church; village in East Orange Township, Essex County, on Morris and Essex Division, Delaware, Lackawanna and Western R. R	Paterson.
Brick Yards; village in Manchester Township, Ocean County	Whitings.
Bricksboro; village in Maurice River Township, Cumberland County, on West Jersey R. R	Tuckahoe.
Bridge Sticks; creek in Fairfield Township, Cumberland County, flows into Ogden Creek.	Bridgeton. Bayside.
Bridgeboro; village in Delran Township, Burlington County.	Burlington.
Bridgepoint; village in Montgomery Township, Somerset County, on No Pike Brook	Princeton.
Bridgeport; village in Bass River Township, Burlington County, on Ives Branch of Wading River	Little Egg Harbor.
Bridgeport; village in Logan Township, Gloucester County, on Raccoon Creek	Chester.
Bridgeton; township in Cumberland County; area, 13 square miles	Bridgeton.
Bridgeton; city in Bridgeton Township, Cumberland County.	Bridgeton.
Bridgeton Junction; village in Bridgeton Township, Cumberland County	Bridgeton.
Bridgeville; village in Oxford Township, Warren County, on Pequest River and on Lehigh and Hudson River R. R	Delaware Water Gap.
Bridgewater; township in Somerset County; area, 44 square miles	Somerville.
Brielle; village in Wall Township, Monmouth County, on Philadelphia and Long Branch R. R	Asbury Park.
Brigantine; village on coast of Galloway Township, Atlantic County	Atlantic City.
Brigantine; inlet projecting from Atlantic Ocean into Galloway Township, Atlantic County	Atlantic City.
Brigantine; channel in coast swamp in Galloway Township, Atlantic County, flows into Brigantine Inlet	Atlantic City.
Brigantine; beach on coast of Galloway Township, Atlantic County	Atlantic City.
Brigantine; life-saving station on Brigantine Beach	Atlantic City.
Brighton; village in Andover Township, Sussex County, on Lehigh and Hudson River R. R	Hackettstown.
Brindletown; village in Plumstead Township, Ocean County, on South Run	Bordentown.
Broad Creek Thorofare; passage in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Broad Lane; village in Monroe Township, Gloucester County	Hammonton.
Broad Thorofare; passage in coast swamp in Egg Harbor Township, Atlantic County, connecting Scull Bay with Great Egg Harbor	Great Egg Harbor.
Broadway; village in northern part of Franklin Township, Warren County	Easton.
Brockaway; brook in Mullica Township, Atlantic County, flows into Mullica River	Mullica.
Brook Valley; village in southern part of Pequonnock Township, Morris County, on Stony Brook	Morristown.

	Names of sheets.
Brookdale; village in northern part of Bloomfield Township, Essex County, on Morris Canal	Paterson.
Brooklyn; village in Byram Township, Sussex County, at outlet of Lake Hopatcong	Lake Hopatcong.
Brookside; village in northeast part of Mendham Township, Morris County	Lake Hopatcong.
Brookville; village in southern part of Delaware Township, Hunterdon County, on Delaware River and on Belvidere Division, Pennsylvania R. R.	Lambertville.
Brotzmanville; village in Pahaquarry Township, Warren County, on Delaware River	Bushkill Falls.
Brown; village in northern part of West Milford Township, Passaic County, on southern coast of Greenwood Lake	Greenwood Lake.
Brown; village in Lumberton Township, Burlington County, on Philadelphia, Marlton and Medford R. R.	Mount Holly.
Browns Mills; village in Pemberton Township, Burlington County, on Rancocas Creek	Pemberton.
Browns Mills; station in Pembroke Township, Burlington County, on Philadelphia and Long Branch R. R.	Pemberton.
Browning; village in Knowlton Township, Warren County, on Delaware River and on Delaware, Lackawanna and Western R. R.	Delaware Water Gap.
Browntown; village in Madison Township, Middlesex County	New Brunswick.
Brownsville; village in Gloucester Township, Camden County, on North Branch of Timber Creek	Philadelphia.
Buck; island in swamp in Independence Township, Warren County	Hackettstown.
Buck; creek in Washington and Hamilton Townships, Mercer County, flows into Crosswick Creek	Bordentown.
Buck Bar; island off western coast of Wallpack Township. Sussex County, in Delaware River	Wallpack.
Buckabear; pond in West Milford Township, Passaic County.	Greenwood Lake.
Buckhorn; creek rising in Oxford Township, flows southwest into Delaware River in northwest part of Harmony Township, Warren County	Delaware Water Gap.
Buckingham; village in Manchester Township, Ocean County, on Philadelphia and Long Branch R. R.	Whitings.
Buckmire; pond in southeast part of Green Township, Sussex County	Hackettstown.
Buckshutem; swamp in Millville, Commercial, and Downe Townships, Cumberland County	Bridgeton.
Buckshutem; village in Commercial Township, Cumberland County	Bridgeton.
Budd; lake in central part of Mount Olive Township, Morris County.	Hackettstown. Lake Hopatcong.
Buddstown; village in Southampton Township, Burlington County	Pemberton.
Buena Vista; village in Greenwich Township, Cumberland County	Bayside.
Buena Vista; village on West Jersey R. R., in Atlantic County	Hammonton.
Buena Vista; township in Atlantic County; area, 58 square miles	Hammonton.

	Names of sheets.
Buffin; brook in Pemberton Township, Burlington County, tributary to Pole Bridge Brook	Pemberton.
Bull; creek in Washington Township, Burlington County, flows into Mullica River	Mullica.
Bull; island off coast of Kingwood and Delaware townships, Hunterdon County, in Delaware River	Doylestown.
Bull Branch; brook in Randolph Township, Burlington County, flows into west branch of Wading River	Mullica.
Bull Ferry; village in North Bergen Township, Hudson County, on Hudson River	Harlem.
Bulltown; village in Washington Township, Burlington County	Mullica.
Burkville; village in Millstone Township, Monmouth County	Cassville.
Burleigh; village in Middle Township, Cape May County, on Anglesea R. R	Dennisville.
Burlington; county in southern part of State; area, 899 square miles.	Germantown. Hammonton. Philadelphia. Burlington. Mount Holly. Bordentown. Pemberton. Mullica. Whitings. Little Egg Harbor. Atlantic City.
Burlington; township in Burlington County; area, 19 square miles	Burlington.
Burlington; island in Delaware River, in Burlington Township, Burlington County	Burlington.
Burlington; city in Burlington Township, Burlington County, on Delaware River and on Amboy Division, Pennsylvania R. R	Burlington.
Burnt Bridge Branch; brook in Woodland Township, Burlington County; flows into Burrs Mill Brook	Pemberton.
Burnt Mill; village in Branchburg Township, Somerset County, at junction of Lamington River and North Branch of Raritan River	Somerville.
Burnett; brook, tributary to North Branch of Raritan River, rises in Randolph Township, and forms boundary between Mendham and Chester Townships, Morris County	Lake Hopatcong.
Burrough Hole; passage in coast swamp, in Upper Township, Cape May County	Sea Isle.
Burrs Mill; brook in Woodland and Southampton Townships, Burlington County; flows into Friendship Creek	Pemberton.
Burrs Mill; village in Southampton Township, Burlington County, on Burrs Mill Brook	Pemberton.
Burrsville; village in Brick Township, Ocean County, on Metedconk River	Asbury Park.
Burt Creek; village in Sayreville Township, Middlesex County	New Brunswick.
Bustleton; village in Florence Township, Burlington County	Burlington.
Butler Place; village in Woodland Township, Burlington County	Pemberton.

	Names of sheets.
Buttonwood Corners; village in East Amwell Township, Hunterdon County	Lambertville.
Butzville; village in Oxford Township, Warren County, on Pequest River, on Delaware, Lackawanna and Western R. R., and on Lehigh and Hudson River R. R	Delaware Water Gap.
Byram; township in Sussex County; area, 36 square miles..	Hackettstown. Lake Hopatcong. Franklin.
Byram; cove, an arm of Lake Hopatcong indenting eastern coast of Byram Township, Sussex County	Lake Hopatcong.
Byram; village in Kingwood Township, Hunterdon County, on Delaware River and on Belvidere Division, Pennsylvania R. R	Doylestown.
Cabin Branch; brook in Jackson and Manchester townships, Ocean County, flows into Ridgway Branch	Cassville.
Cakepoulin; creek in Franklin Township, Hunterdon County, tributary to South Branch of Raritan River	High Bridge.
Calais; village in Randolph Township, Morris County	Lake Hopatcong.
Caldwell; village in Caldwell Township, Essex County	Morristown.
Caldwell; township in Essex County; area, 28 square miles.	Paterson. Morristown.
Caldwell Junction; village in Caldwell Township, Essex County	Paterson.
Calico; village in Bass River Township, Burlington County.	Little Egg Harbor.
Califon; village in Tewksbury Township, Hunterdon County, on South Branch of Raritan River, and on High Bridge Branch of New Jersey Central R. R	High Bridge.
Cambridge; village in Delran Township, Burlington County, on Amboy Division, Pennsylvania R. R	Burlington.
Camden; county in southwestern part of the State; area, 226 square miles.	Philadelphia. Glassboro. Mount Holly. Hammonton. Mullica.
Camden; city in Camden County, on Delaware River	Philadelphia.
Camp Gaw; village in central part of Franklin Township, Bergen County, on New York, Susquehanna and Western R. R	Ramapo.
Camp Meeting; lake between Asbury Park and Ocean Grove, Neptune Township, Monmouth County	Asbury Park.
Canistear; village in Vernon Township, Sussex County	Greenwood Lake.
Canoe; brook in Livingston and Milburn townships, Essex County, tributary to Passaic River.	Morristown. Plainfield.
Canton; village in Lower Alloways Township, Salem County, Bayside.	
Cape Island; sound in Lower Township, Cape May County..	Cape May.
Cape Island; creek in Lower Township, Cape May County..	Cape May.
Cape May; county, in extreme southern part of the State; area, 442 square miles.	Cape May. Dennisville. Tuckahoe. Great Egg Harbor. Sea Isle.
Cape May; city in southern part of Cape May County, on *Cape May and* Sewell Point R. R	Cape May.

	Names of sheets.
Cape May; life-saving station at southwestern extremity of Lower Township, Cape May County	Cape May.
Cape May; light-house at southwest extremity of Lower Township, Cape May County	Cape May.
Cape May and Sewell Point; railroad running west along southern shore of Lower Township, Cape May County, connects with West Jersey R. R.	Cape May.
Cape May Court-House; town in Cape May County, on West Jersey R. R.	Dennisville.
Cape May Point; borough in Cape May County	Cape May.
Carasaljo; lake, an enlargement of Metedeconk River, in Brick Township, Ocean County	Asbury Park.
Cary; village in Roxbury Township, Morris County, on Drakers Brook and on High Bridge Branch of Central R. R. of New Jersey	Lake Hopatcong.
Carlisle Run; brook in Alloways Township, Salem County, flows into Alloways Creek	Salem.
Carlsburg; village in Deerfield Township, Cumberland County	Bridgeton.
Carlstadt; town in western part of Lodi Township, Bergen County, on New Jersey and New York R. R.	Paterson.
Carmantown; village in Hamilton Township, Atlantic County.	Mullica. Great Egg Harbor.
Carmel; village in Bridgeton Township, Cumberland County.	Bridgeton.
Carpentersville; village in Pohatcong Township, Warren County, on Delaware River and on Pennsylvania R. R., Belvidere Division	Easton.
Carrs Tavern; village in Millstone Township, Monmouth County	Cassville.
Carter; brook in South Brunswick Township, Middlesex County, tributary to Millstone River	Princeton.
Carteret; village in Woodbridge Township, Middlesex County, on New York and Long Branch R. R.	Staten Island.
Carvel; island in Manahawken Bay, in Stafford Township, Ocean County	Long Beach.
Cassville; village in Jackson Township, Ocean County	Cassville.
Castle; point of land off eastern coast of Hoboken City, projecting into Hudson River	Staten Island.
Catawba; village in Hamilton Township, Atlantic County	Great Egg Harbor.
Catfish; pond in Stillwater Township, Sussex County	Wallpack.
Cavan; point of land projecting from southern coast of Jersey City into New York Upper Bay	Staten Island.
Cave Cabin Branch; brook in Ocean and Lacey townships, Ocean County, flows into North Branch of Forked River.	Whitings.
Cecil; village in Monroe Township, Gloucester County, on Hospitality Branch of Great Egg Harbor	Hammonton.
Cedar; brook rising in Fanwood Township, flows through Plainfield Township, Union County, and empties into Bound Brook, Piscataway Township, Middlesex County.	Plainfield.
Cedar; brook rising in Hamilton Township, flows through portion of Weymouth Township, Atlantic County, into South River.	Tuckahoe. Great Egg Harbor.
Cedar; brook in Alloways Township, Salem County, flows into Alloways Creek	Salem.

	Names of sheets.
Cedar; brook in Monroe Township, Middlesex County, flows into Cranbury Brook	New Brunswick.
Cedar; creek in Lower Township, Cape May County	Cape May.
Cedar; creek on boundary between Berkeley and Lacey townships, Ocean County, flows into Barnegat Bay.	Whitings. Barnegat.
Cedar; creek in Downe Township, Cumberland County, flows into Dividing Creek	Bridgeton.
Cedar; creek in Lawrence Township, Cumberland County, flows into Delaware River.	Bridgeton. Bayside.
Cedar; lake in Blairstown Township, Warren County	Hackettstown.
Cedar; pond in West Milford Township, Passaic County	Greenwood Lake.
Cedar Bonnet; group of Islands in Manahawken Bay, in Stafford Township, Ocean County	Long Beach.
Cedar Branch; brook in Hammonton Township, Atlantic County, flows into Great Swamp Branch of Mullica River.	Hammonton. Mullica.
Cedar Branch; brook in Weymouth Township, Atlantic County, flows into Great Egg Harbor River	Great Egg Harbor.
Cedar Branch; brook in Landis Township, Cumberland County, tributary to Manantico Creek	Tuckahoe.
Cedar Branch; brook in Maurice River Township, Cumberland County, flows into Manumuskin River	Tuckahoe.
Cedar Bridge; village in Union Township, Ocean County	Whitings.
Cedar Bridge; brook in Brick Township, Ocean County, flows into Metedeconk River	Asbury Park.
Cedar Bridge; village in Brick Township, Ocean County, at mouth of Cedar Bridge Brook	Asbury Park.
Cedar Brook; village in Winslow Township, Camden County, on Philadelphia and Reading R. R.	Hammonton.
Cedar Creek; village in Lacey Township, Ocean County	Barnegat.
Cedar Creek; life-saving station on Island Beach in Lacey Township, Ocean County	Barnegat.
Cedar Grove; village in Princeton Township, Mercer County	Princeton.
Cedar Grove; village in Dover Township, Ocean County	Barnegat.
Cedar Grove; village in Caldwell Township, Essex County, on Peckman Brook	Paterson.
Cedar Grove; village in Stafford Township, Ocean County	Little Egg Harb
Cedar Grove; village in Dennis Township, Cape May County	Dennisville.
Cedar Lake; village in Buena Vista Township, Atlantic County, on New Jersey Southern R. R.	Hammonton.
Cedar Run; brook in Southampton Township, Burlington County, flows into Rancocas Creek	Pemberton.
Cedar Run; brook in Stafford and Eagleswood townships, Ocean County, flows into Little Egg Harbor.	Little Egg Harb Long Beach.
Cedar Run; village in Stafford Township, Ocean County, on Cedar Run	Little Egg Harb
Cedar Swamp; creek rising in Dennis Township, flows northeast through Upper Township, Cape May County, into Tuckahoe River.	Dennisville. Sea Isle. Great Egg Harb
Cedarville; village in Lawrence Township, Cumberland County, on Cedar Creek	Bridgeton.
Center; township in Camden County; area, 13 square miles	Philadelphia.
Center Grove; village in Lawrence Township, Cumberland County	Bridgeton.
Center Square; village in Logan Township, Gloucester County	Chester.

	Names of sheets.
Center Square; station on Delaware River R. R., in Logan Township, Gloucester County	Chester.
Centerton; village in Pittsgrove Township, Salem County	Glassboro.
Centerton; village in Mount Laurel Township, Burlington County	Mount Holly.
Centerville; village in Shrewsbury Township, Monmouth County	Sandy Hook.
Centerville; village in central part of Galloway Township, Atlantic County	Atlantic City.
Centerville; village in Readington Township, Hunterdon County, on Pleasant Run.	High Bridge. Somerville.
Centerville; part of Bayonne City on New York Upper Bay and on Central R. R. of New Jersey	Staten Island.
Chadwick; village on reef in Dover Township, Ocean County, on Philadelphia and Long Branch R. R	Barnegat.
Chadwick; life-saving station on reef in Dover Township, Ocean County	Barnegat.
Chairville; village in Medford Township, Burlington County, at junction of Bear Swamp River and Little Creek	Mount Holly.
Chamberlain; brook in Lacey Township, Ocean County, tributary to Cedar Creek.	Whitings. Barnegat.
Chambers; brook heading in Readington Township, Hunterdon County, flows into North Branch of Raritan River in Branchburg Township, Somerset County.	High Bridge. Somerville.
Chambersburg; borough, part of Trenton, in Mercer County	Bordentown.
Changewater; village in Washington Township, Warren County, on Musconetcong River and on Delaware, Lackawanna and Western R. R	High Bridge.
Channel; creek in Eagleswood Township, Ocean County, flows into Little Egg Harbor	Little Egg Harbor.
Chapel Hill; light on Chapel Hill in Middletown Township, Monmouth County	Sandy Hook.
Chapel Hill; village in Middletown Township, Monmouth County	Sandy Hook.
Charleston; village in Willingboro Township, Burlington County	Burlington.
Charleston Springs; village in Millstone Township, Monmouth County	Cassville.
Charlestown; village in Bethlehem Township, Hunterdon County	High Bridge.
Charlottesburg; village in West Milford Township, Passaic County, on Pequonnock River and on New York, Susquehanna and Western R. R	Greenwood Lake.
Chatham; township in Morris County; area, 23 square miles.	Morristown. Plainfield.
Chatham; village in Chatham Township, Morris County, on Passaic River, and on Delaware, Lackawanna and Western R. R	Plainfield.
Chatsworth; village in Woodland Township, Burlington County	Pemberton.
Cheapside; village in Livingston Township, Essex County	Morristown.
Cheesequake; creek forming partial boundary between Sayreville and Madison townships, Middlesex County, flows into Raritan Bay	New Brunswick.

	Names of sheets.
Cherry Hill; village in Midland Township, Bergen County, on Hackensack River and on New Jersey and New York R. R.	Paterson.
Cherry Ridge; village in Vernon Township, Sussex County.	Greenwood Lake.
Cherryville; village in Franklin Township, Hunterdon County	High Bridge.
Chesilhurst; village in Waterford Township, Camden County, on Camden and Atlantic R. R.	Hammonton.
Chester; township in Morris County; area, 30 square miles.	Somerville. Lake Hopatcong.
Chester; township in Burlington County; area, 19 square miles.	Mount Holly. Burlington.
Chester; town in Chester Township, Morris County, on Chester Branch of Delaware, Lackawanna and Western R. R.	Lake Hopatcong.
Chester; island in Delaware River forming part of Greenwich and Logan townships, Gloucester County	Chester.
Chesterfield; township in Burlington County; area, 22 square miles	Bordentown.
Chesterville; village in Delran Township, Burlington County, on Swede Run	Burlington.
Chestnut; branch of Mantua Creek, rises in Glassboro Township flows north through Mantua Township, Gloucester County.	Philadelphia. Glassboro.
Chestnut Creek; peninsula projecting from Galloway Township, Atlantic County, into the coast swamp	Little Egg Harbor.
Chestnut Ridge; village in Orvil Township, Bergen County.	Ramapo.
Chestnut Run; brook in Stow Creek Township, Cumberland County, tributary to Newport Creek	Bayside.
Chews Landing; village in Gloucester Township, Camden County, on North branch of Timber Creek	Philadelphia.
Chicken Bone; hill in Ocean Township, Ocean County; elevation, 104 feet	Whitings.
Chimney Rock; mountain in Bridgewater Township, Somerset County; altitude, 418 feet	Somerville.
Chincapin Branch; brook in Maurice River Township, Cumberland County, flows west into Manumuskin River	Tuckahoe.
Chingarora; creek in Raritan Township, Monmouth County, flows into Raritan Bay	Sandy Hook.
Church; landing on coast of Lower Penns Neck Township, Salem County	Wilmington.
Cinnaminson; township in Burlington County; area, 12 square miles.	Burlington. Mount Holly. Philadelphia. Germantown.
Cinnaminson; village in Cinnaminson Township, Burlington County	Burlington.
City Line Station; village in Haddon Township, Camden County, on Camden and Atlantic R. R.	Philadelphia.
Clam; island in Barnegat Bay, in Ocean Township, Ocean County	Barnegat.
Clam; creek in Berkeley Township, Ocean County, flows into Barnegat Bay	Barnegat.
***Claremont**; part of* Jersey City on Central R. R. of New *Jersey and on* New York Upper Bay	Staten Island.

	Names of sheets.
Clark; township in Union County; area, 5 square miles	Plainfield.
Clark; village in Millville Township, Cumberland County	Bridgeton.
Clark; landing in Galloway Township, Atlantic County, on Mullica River	Mullica.
Clark Branch; brook in Hopewell Township, Cumberland County, flows into Cohansey Creek	Salem.
Clark Branch; brook in Winslow and Waterford Townships, Camden County, flows into Mechesactauxin branch of Mullicas River.	Hammonton. Mullica.
Clarksboro; village in East Greenwich Township, Gloucester County, on West Jersey R. R.	Philadelphia.
Clarksburg; village in Millstone Township, Monmouth County	Cassville.
Clarkstown; village in Hamilton Township, Atlantic County.	Great Egg Harbor.
Clarksville; village in West Windsor Township, Mercer County	Princeton.
Clarksville; village in Lebanon Township, Hunterdon County, on Spruce Run and on Delaware, Lackawanna and Western R. R.	High Bridge.
Clay Pit; creek in Middletown Township, Monmouth County, flows into Navesink River	Sandy Hook.
Clayton; township in Gloucester County; area, 22 square miles	Glassboro.
Clayton; borough in Gloucester County, on West Jersey R. R.	Glassboro.
Clayton Corner; village in Manalapan Township, Monmouth County	Cassville.
Clear Run; brook in Maurice River Township, Cumberland County, tributary to Muskee Creek	Tuckahoe.
Clear Run; brook in Maurice River Township, Cumberland County, flows into Maurice River	Tuckahoe.
Clementon; village in Gloucester Township, Camden County, on Philadelphia and Atlantic City R. R.	Mount Holly.
Clements; village in Greenwich Township, Gloucester County, on Delaware River R. R.	Chester.
Cliffwood; village in Matawan Township, Monmouth County.	Sandy Hook.
Clifton; town in Acquackanonck Township, Passaic County, on New York, Lake Erie and Western R. R., and on Boonton branch of Delaware, Lackawanna and Western R. R.	Paterson.
Clinton; township in Hunterdon County; area, 28 square miles	High Bridge.
Clinton; township in Essex County; area, 7 square miles	Plainfield. Staten Island.
Clinton; town in Clinton Township, Hunterdon County, on South branch of Raritan River and on Clinton branch of Lehigh Valley R. R.	High Bridge.
Clinton; village in Caldwell Township, Essex County	Morristown.
Clinton; village in West Milford Township, Passaic County.	Greenwood Lake.
Clonmell; creek in Greenwich Township, Gloucester County, flows into Delaware River	Chester.
Closter; village in Harrington Township, Bergen County, on Tienekill Creek and on Northern R. R. of New Jersey.	Harlem.
Clove; river in Wantage Township, Sussex County, enters the Papakating Creek at Deckertown.	Port Jervis. Franklin.
Clover Hill; village *in Hillsboro Township*, Somerset County.	Lambertville.

	Names of sheets.
Clyde; village in Franklin Township, Somerset County, on Millstone branch of Pennsylvania R. R.	Princeton.
Coate; point on coast of Dover Township, Ocean County	Barnegat.
Cobbs Island; village in Lower Penns Neck Township, Salem County	Salem.
Cohansey; village in Hopewell Township, Cumberland County	Salem.
Cohansey; light-house on coast of Greenwich Township, Cumberland County	Bayside.
Cohansey; creek rising in Alloway Township, Salem County, flows southerly through Cumberland County into Delaware River.	Salem. Bridgeton. Bayside.
Cokesburg; village in Tewksbury Township, Hunterdon County	High Bridge.
Cold Spring; village in Lower Township, Cape May County, on West Jersey R. R.	Cape May.
Cold Spring; life-saving station on southern shore of Lower Township, Cape May County	Cape May.
Cold Spring; inlet projecting from Atlantic Ocean into southeast shore of Lower Township, Cape May County	Cape May.
Colemantown; village in Mount Laurel Township, Burlington County	Mount Holly.
Coleville; village in Montage Township, Sussex County, on Clove River	Port Jervis.
Collier Mills; village in Plumstead Township, Ocean County.	Cassville.
Collingswood; borough in Haddon Township, Camden County, on Camden and Atlantic R. R.	Philadelphia.
Colts Neck; village in Atlantic Township, Monmouth County, on Yellow Brook	Sandy Hook.
Columbia; village in Knowlton Township, Warren County, on Delaware River and on New York, Susquehanna and Western R. R.	Delaware Water
Columbia Bridge; village in Chatham Township, Morris County, on Passaic River	Morristown.
Columbus; village in Mansfield Township, Burlington County, on Kinkora branch, Amboy division, Pennsylvania R. R.	Bordentown.
Calwell; village in Mullica Township, Camden County	Hammonton.
Comfort; point extending from Raritan Township, Monmouth County, into Raritan Bay	Sandy Hook.
Comical Corner; village in Pemberton Township, Burlington County	Pemberton.
Commercial; township in Cumberland County; area, 35 square miles.	Tuckahoe. Maurice Cove. Bridgeton.
Communipaw; part of Jersey City on New York Upper Bay.	Staten Island.
Como; lake in Wall Township, Monmouth County	Asbury Park.
Compton; creek in Middletown Township, Monmouth County, flows into Sandy Hook Bay	Sandy Hook.
Conaskonk; point extending from Raritan Township, Monmouth County, into Raritan Bay	Sandy Hook.
Conklin; island in Union Township, Ocean County, in Barnegat Bay	Long Beach.
Connecticut Farms; village in Union Township, Union *County*	Plainfield.

	Names of sheets.
beacon on coast of Middletown Township, Mon- County	Sandy Hook.
ille; village on boundary between Galloway and **arbor** townships, Atlantic County	Atlantic City.
; point of land projecting from east coast of Bayonne Iudson County, into New York Upper Bay	Staten Island.
village in Morris Township, Morris County, on Del- Lackawanna and Western R. R	Morristown.
ıd in Blairstown Township, Warren County	Hackettstown.
ıd in Brick Township, Ocean County	Asbury Park.
dge; Village in Hanover Township, Morris County, saic River	Morristown.
n; village in New Hanover Township, Burlington , on North Run	Bordentown.
; brook in Alloway Township, Salem County, flows loways Creek	Salem.
; village in Warren Township, Somerset County..	Somerville.
illage in West Milford Township, Passaic County, enwood Lake at head of Wanaque River and on ork and Greenwood Lake R. R	Greenwood Lake.
tation in Logan Township, Gloucester County, on re River R. R	Chester.
oint of land projecting from Camden City into Del- River	Philadelphia.
reek rising in Waterford Township, flows through n County, into Delaware River at Camden City.	Philadelphia. Mount Holly.
anch; brook in Woodland Township, Burlington , tributary to Mount Misery Brook	Pemberton.
ranch; brook in Waterford Township, Camden , flows into Mechesactauxin Branch of Mullica	Hammonton.
reek, North Branch of; creek rising in Waterford ip, Camden County, flows through Delaware ip, tributary to Coopers Creek.	Philadelphia. Mount Holly.
wn; village in Delaware Township, Camden , on Coopers Creek	Philadelphia.
wn; village in Willingboro Township, Burlington	Burlington.
reek in Kingwood Township, Hunterdon County, ry to Delaware River	Easton.
ll; village in Raritan Township, Hunterdon County, nington Branch Belvidere Division R. R., and on ic River	Lambertville.
mountain range extending along western ry of Rockaway Township, Morris County.	Greenwood Lake. Morristown. Lake Hopatcong.
creek in Galloway Township, Atlantic County, nto Reed Bay	Atlantic City.
'horofare; passage in coast swamp in Galloway ip, Atlantic County	Atlantic City
un; brook in Deerfield Township, Cumberland , flows into Cohansey Creek	Bridgeton.
illage in Lodi Township, Bergen County, on New and New York R. R	Paterson.

	Names of sheets.
Corson; inlet projecting from Atlantic Ocean into coast of Upper Township, Cape May County	Sea Isle.
Corson; sound in coast swamp in Upper Township, Cape May County	Sea Isle.
Corson Inlet; life-saving station on coast of Upper Township, Cape May County	Sea Isle.
Cossa Boone Branch; brook in Landis Township, Cumberland County, flows into Bears Head Branch	Tuckahoe.
Cotterall; brook in Brick Township, Ocean County, flows into Metedeconk River	Asbury Park.
Course; landing in Mannington Township, Salem County, on Salem Creek	Salem.
Cow Tongue; point of land projecting from eastern coast of Byram Township, Sussex County, into Lake Hopatcong.	Lake Hopatcong.
Cow Yard; brook rising in South Brunswick Township, and forming boundary between North and South Brunswick townships, Middlesex County, and tributary to Lawrence Brook.	Princeton. New Brunswick.
Cox; village in Eagleswood Township, Ocean County, on Tuckahoe R. R.,	Little Egg Har[illegible]
Coxall; creek in Lower Township, Cape May County	Cape May.
Cranberry; hill in Atlantic Township, Monmouth County; elevation, 244 feet	Sandy Hook.
Cranberry; brook in Manchester Township, Ocean County, and Pemberton Township, Burlington County, tributary to Pole Bridge Brook.	Whitings. Pemberton.
Cranberry Hall; village in New Hanover Township, Burlington County	Bordentown.
Cranberry Park; village in New Hanover Township, Burlington County	Bordentown.
Cranbury; township in Middlesex County; area, 18 square miles.	Princeton. New Brunswick.
Cranbury; village in Cranbury Township, Middlesex County, on Cranbury Brook	Princeton.
Cranbury; station on Camden and Amboy division Pennsylvania R. R., in Cranbury Township, Middlesex County	New Brunswick.
Cranbury; brook in Monroe and Cranbury Townships, Middlesex County, flows into Millstone River.	New Brunswick. Princeton.
Cranetown; village in Randolph Township, Morris County.	Lake Hopatcong.
Cranford; township in Union County; area, 6 square miles.	Plainfield.
Cranford; village in Cranford Township, Union County, on Rahway River and on Central R. R. of New Jersey	Plainfield.
Cranford; hill in Middleton Township, Monmouth County; elevation, 391 feet	Sandy Hook.
Crawford Corner; village in Middleton Township, Monmouth County	Sandy Hook.
Cream Ridge; village in Upper Freehold Township, Monmouth County, on Pemberton and Hightstown R. R.	Bordentown.
Creesville; village in Washington Township, Gloucester County	Philadelphia.
Cresse Throrofare; passage in coast swamp in Middle Township, Cape May County	Dennisville.
Cresskill; town in Palisade Township, Bergen County, on Northern R. R. of New Jersey and on Tienekill Creek	Harlem.

	Names of sheets.
Crook Horn; passage in coast swamp in Upper Township, Cape May County	Sea Isle.
Crooked; creek in Middle Township, Cape May County, flowing into Nicholas Channel	Dennisville.
Crooked Throrofare; passage in coast swamp in Middle Township, Cape May County	Dennisville.
Cropwell; village in Eversham Township, Burlington County, on Philadelphia, Marlton and Medford R. R	Mount Holly.
Cross; creek in Lawrence Township, Cumberland County, flows into Back Creek	Bayside.
Cross Ditch; passage in coast swamp in Fairfield Township, Cumberland County	Bayside.
Cross Keys; village in Monroe Township, Gloucester County.	Glassboro
Cross Roads; village in Medford Township, Burlington County	Mount Holly.
Crosswick; creek heading in two streams, the North Run and the South Run, flows across Ocean County and on boundary between Burlington and Mercer counties into Delaware River.	Cassville. Bordentown.
Crosswick; village in Chesterfield Township, Burlington County, on Crosswick Creek	Bordentown.
Crow; creek rising in Middle Township, Cape May County, flows into Dennis Creek	Dennisville.
Crowder Branch; brook in Maurice River Township, Cumberland County, flowing into Maurice River	Tuckahoe.
Crowfoot; village in Evesham Township, Burlington County.	Mount Holly.
Crowleytown; village in Washington Township, Burlington County	Mullica.
Croton; village in Delaware and Raritan townships, Hunterdon County, on Wickecheoke Creek	High Bridge.
Croyden; village in Bristol Township, Bucks County	Burlington.
Cruser; brook in Montgomery Township, Somerset County, tributary to No Pike Brook	Princeton.
Crystal Lake; village in Franklin Township, Bergen County, on New York, Susquehanna and Western R. R	Ramapo.
Cuckolds; brook in Bridgewater Township, Somerset County, tributary to Raritan River	Somerville.
Cullier Run; brook in Mannington Township, Salem County, flows into Mannington Creek	Salem.
Culvert; pond in Franklin Township, Sussex County	Wallpack.
Culver; gap in eastern part of Sandyston Township, Sussex County	Wallpack.
Cumberland; county in southwest part of the State: area, 685 square miles.	Bayside. Salem. Glassboro. Bridgeton. Maurice Cove. Dennisville. Tuckahoe. Hammonton.
Cumberland; village in Maurice River Township, Cumberland County, on Manumuskin River	Tuckahoe.
Cushetunk; mountain in eastern part of Clinton Township, Hunterdon County; greatest elevation is 839 feet	High Bridge.

	Names of sheets.
Cuthbert Station; village in Haddon Township, Camden County, on Camden and Atlantic R. R.	Philadelphia.
Dacosta; village in Hammonton Township, Atlantic County, on Camden and Atlantic R. R.	Hammonton.
Dalbows; landing on coast of Oldmans Township, Salem County	Chester.
Daniel; island in Little Egg Harbor, Eagleswood Township, Ocean County	Long Beach.
Danville; village in Hope Township, extending across boundary into Independence Township, Warren County, on Lehigh and Hudson River R. R.	Hackettstown.
Daretown; village in Upper Pittsgrove Township, Salem County	Salem.
Darlington; village in Hohokus Township, Bergen County, on Ramapo River	Ramapo.
Davidstown; village in Gloucester Township, Camden County	Philadelphia.
Davis; village in Upper Freehold Township, Monmouth County, on Pemberton and Hightstown R. R.	Bordentown.
Davis; cove indenting eastern coast of Byram Township, Sussex County	Lake Hopatcong.
Dayton; village in South Brunswick Township, Middlesex County.	Princeton.
Dayton; creek in Lawrence Township, Cumberland County flows into Back Creek	Bayside.
De Hansey; brook in Greenwich Township, Gloucester County, tributary to Still Run	Chester.
De Kays; village in Vernon Township, Sussex County, on Lehigh and Hudson River R. R	Greenwood Lake.
Deacon; village in Burlington Township, Burlington County, on Burlington Branch, Amboy Division, Pennsylvania R. R	Burlington.
Dead; river in Bernard Township, Somerset County, tributary to Passaic River	Somerville.
Dead; creek in Newark, Essex County, tributary to Maple Island Creek	Staten Island.
Dead Thorofare; passage in coast swamp in Middle Township, Cape May County	Dennisville.
Deak Tree; run in Montgomery Township, Somerest County, tributary to No Pike Brook	Princeton.
Deal; lake in Ocean Township, Monmouth County, flows into Atlantic Ocean	Asbury Park.
Deal; village in Ocean Township, Monmouth County	Sandy Hook.
Deal; coast village in Ocean Township, Monmouth County,	Asbury Park.
Deal Beach; village in Ocean Township, Monmouth County, on New York and Long Branch R. R	Asbury Park.
Deans; village in South Brunswick Township, Middlesex County, on Pennsylvania R. R	Princeton.
Deb Thorofare; passage in coast swamp in Calloway Township, Atlantic County	Atlantic City.
Decker; pond in Vernon Township, Sussex County	Franklin.
Deckertown; town in Wantage Township, Sussex County, on New York, Susquehanna and Western R. R	Franklin.
Deep; creek in Lower Alloways Creek Township, Salem County, flows into Delaware River	Bayside.

	Names of sheets.
eep; point projecting from Little Egg Harbor townships, Burlington County, into Great Bay	Little Egg Harbor
eep Run; brook in Shamony Township, Burlington County, flows into Batsto River.	Pemberton. Mullica.
eep Run; brook in Buena Vista and Hamilton townships, Atlantic County, flows into Great Egg Harbor River	Hammonton.
eep Run; brook in Alloway and Quinton townships, Salem County, tributary to Alloways Creek	Salem.
ep Run; brook in Marlboro Township, Monmouth County, and Madison Township, Middlesex County, flows into South River	New Brunswick.
epavaal; brook in Caldwell Township, Essex County, tributary to Passic River	Morristown.
epwater; point projecting from Lower Penns Neck Township, Salem County, into Delaware River	Wilmington.
erfield; township in Cumberland County; area, 41 square miles.	Bridgeton. Bayside. Glassboro.
eerfield; village in Deerfield Township, Cumberland County.	Glassboro.
elair Station; village in Stockton Township, Camden County, on Pennsylvania R. R	Philadelphia.
elanco; village in Beverly Township, Burlington County, on Delaware River, and on Amboy Division, Pennsylvania R. R	Burlington.
Delawanna; village in Acquackanonck Township, Passaic County, on Boonton Branch of Delaware, Lackawanna and Western R. R	Paterson.
Delaware; township in Hunterdon County; area, 43 square miles.	Doylestown. Lambertville. High Bridge.
Delaware; township in Camden County; area, 24 square miles.	Mount Holly. Philadelphia.
elaware; village in Knowlton Township, Warren County, on Delaware River, on Delaware, Lackawanna and Western R. R., and on New York, Susquehanna and Western R. R	Delaware Water Gap.
elaware and Raritan; canal connecting New Brunswick and Trenton, thence follows the Delaware River as far as Lambertville.	Plainfield. Somerville. Princeton. Bordentown. Burlington. Lambertville.
elaware Bay and Cape May; railroad running along shore of Lower Township, Cape May County, connecting with West Jersey R. R	Cape May.
ellett; village in Shamong Township, Burlington County.	Mount Holly.
elran; township in Burlington County; area, 9 square miles.	Burlington. Mount Holly.
emarest; village in Harrington Township, Bergen County, on Tienekill Creek, and on Northern R. R. of New Jersey.	Harlem.
en; brook rising in Randolph Township, flows into Rockaway River in Rockaway Township, Morris County.	Morristown. Lake Hopatcong.
enmark; village in Rockaway Township, Morris County, on Morris County R. R	Lake Hopatcong.
enmark; pond in Rockaway Township, Morris County	Lake Hopatcong.

	Names of sheets.
Denn Branch; brook in Stow Creek Township, Cumberland County, flows into Stow Creek	Bayside.
Dennis; township in Cape May County; area, 68 square miles.	Tuckahoe. Dennisville.
Dennis; creek in Dennis Township, Cape May County, flows into Delaware Bay at boundary line between Dennis and Middle townships	Dennisville.
Dennisville; village in Dennis Township, Cape May County	Dennisville.
Dentdale Station; village in Center Township, Camden County, on Philadelphia and Reading R. R	Philadelphia.
Denville; village in Rockaway Township, on Rockaway River, and on Delaware, Lackawanna and Western R. R., and Boonton Branch of same road	Morristown.
Deptford; township in Gloucester County; area, 20 square miles	Philadelphia.
Devil; brook in South Brunswick Township, Middlesex County, tributary to Millstone River	Princeton.
Devil's Hole; hill in Hampton Township, Sussex County; elevation, 620 feet	Wallpack.
Dias; creek in Middle Township, Cape May County, flows into Delaware Bay	Dennisville.
Dias Creek; village in Middle Township, Cape May County	Dennisville.
Dick; brook in Howell Township, Monmouth County, flows into North Branch of Metedeconk River	Asbury Park.
Dickerson; point of land projecting from Roxbury Township, Morris County, into Lake Hopatcong	Lake Hopatcong.
Dicktown; village in Winslow Township, Camden County	Mount Holly.
Dildine; island off coast of Oxford Township, Warren County, in Delaware River	Delaware Water Gap
Dilkesboro; village in Mantua Township, Gloucester County	Glassboro.
Dilts Corner; village in Delaware Township, Hunterdon County	Lambertville.
Dinner; point projecting from Eagleswood Township, Ocean County, into Little Egg Harbor	Little Egg Harbor
Dinner Point; creek in Eagleswood Township, Ocean County, flows into Little Egg Harbor	Little Egg Harbor
Dismal; swamp in Piscataway and Raritan Townships, Middlesex County	Plainfield.
Dividing; creek in Commercial and Downe Townships, Cumberland County, forming partial boundary between the two Townships, flows into Maurice River Cove.	Bridgeton. Maurice Cove.
Dividing Creek; station in Downe Township, Cumberland County, on Central R. R. of New Jersey	Bridgeton.
Dividing Creek; village in Downe Township, Cumberland County	Bridgeton.
Division; creek in Fairfield Township, Cumberland County, flows into Middle Marsh Creek	Bayside.
Division; creek in North Bergen Township, Hudson County, tributary to Hackensack River	Paterson.
Dixon; pond in Rockaway Township, Morris County	Morristown.
[illegible] Branch; brook in Lacey Township, Ocean County, tributary to Factory Branch	Whitings.
[illegible] brook in Jackson Township, Ocean County, [illegible]	[illegible]

	Names of sheets.
Davenport; village in Berkeley Township, Ocean County, on Philadelphia and Long Branch R. R., and on Davenport Branch of Toms River.	Whitings. Barnegat.
Davenport; brook in Manchester and Berkeley Townships, Ocean County, tributary to Toms River.	Whitings. Barnegat.
Davisville; village in Jackson Township, Ocean County	Cassville.
Decons; pond in Woodland Township, Burlington County	Whitings.
Disbrow; hill in Millstone Township, Monmouth County; elevation, 268 feet	Cassville.
Dock Thorofare; passage in coast swamp in Egg Harbor Township, Atlantic County	Great Egg Harbor.
Dock Watch Hollow; valley in Warren Township, Somerset County	Somerville.
Doctor; creek in Millstone and Upper Freehold townships, Monmouth County, and Hamilton Township, Mercer County, flows into Crosswick Creek.	Bordentown. Cassville.
Doctor; point projecting from Galloway Township, Atlantic County, into Mullica River	Little Egg Harbor.
Dorchester; village in Maurice River Township, Cumberland County, on West Jersey R. R.	Tuckahoe.
Double Trouble; village in Berkeley Township, Ocean County, on Cedar Creek	Barnegat.
Doughty; village in Galloway Township, Atlantic County	Great Egg Harbor.
Doughty; village in Buena Vista Township, Atlantic County.	Tuckahoe.
Doughty; creek in Galloway Township, Atlantic County, flows into Somer Cove	Atlantic City.
Doughty Mill; village in Egg Harbor Township, Atlantic County	Great Egg Harbor.
Dover; township in Ocean County; area, 56 square miles	Barnegat. Asbury Park. Cassville.
Dover; town in Rockaway Township, Morris County, on Rockaway River, Morris Canal, on Delaware, Lackawanna and Western R. R., and on High Bridge Branch of Central R. R., of New Jersey	Lake Hopatcong.
Dover Forge; village in Berkeley Township, Ocean County	Whitings.
Downe; township in Cumberland County; area, 57 square miles.	Bridgetown. Maurice Cove.
Downer; village in Monroe Township, Gloucester County, on Philadelphia and Reading R. R	Glassboro.
Downstown; village in Franklin Township, Gloucester County	Hammonton.
Dunham Corners; village in East Brunswick Township, Middlesex County	New Brunswick.
Drag; island in Great Egg Harbor in Egg Harbor Township, Atlantic County	Great Egg Harbor.
Dragston; village in Downe Township, Cumberland County.	Bridgeton.
Drake; pond in Andover Township, Sussex County	Franklin.
Drake; brook in Roxbury, Mount Olive, and Washington townships, Morris County, flows into South Branch of Raritan River	Lake Hopatcong.
Drakestown; village in Washington Township, Morris County	Hackettstown.
Drakesville; village in Roxbury Township, Morris County, on Morris Canal	Lake Hopatcong.

	Names of sheets.
Drea Hook; village in Readington Township, Hunterdon County	High Bridge.
[illegible] Branch; brook in Hammonton Township, Atlantic County, flows into Cedar Branch of Great Swamp Branch	Hammonton. Mullica.
Drum Bed; an enlargement of Back Creek in Fairfield Township, Cumberland County	Bayside.
Drum Thorofare; passage in coast swamp in Middle Township, Cape May County	Dennisville.
Drumbo; creek in Fairfield Township, Cumberland County, flows into Delaware River	Bayside.
Duck; island in Delaware River in Hamilton Township, Mercer County	Bordentown.
Duck Pond; run in West Windsor Township, Mercer County, tributary to Stony Brook	Princeton.
Dudley Station; village in Stockton Township, Camden County, on Pennsylvania R. R. Amboy division	Philadelphia.
Dukes Bridge; village in Woodland Township, Burlington County	Pemberton.
Duncan; island off coast of Linden Township, Union County, in Arthur Kill	Staten Island.
Dundee Lake; village in Saddle River Township, Bergen County, on Passaic River, and on New York, Susquehanna and Western R. R	Paterson.
Dunellen; borough in Middlesex County, on Green Brook, and on Central R. R. of New Jersey	Plainfield.
Dung Thorofare; passage in coast swamp in Middle Township, Cape May County	Dennisville.
Dunker; pond in West Milford Township, Passaic County	Greenwood Lake.
Dunnfield; village in Pahaquarry Township, Warren County, on Delaware River, and on Delaware, Lackawanna and Western R. R	Delaware Water Gap
Dunnfield; creek in Pahaquarry Township, Warren County, tributary to Delaware River	Delaware Water Gap
Durham; pond in Rockaway Township, Morris County	Morristown.
Dutch Neck; village in West Windsor Township, Mercer County	Princeton.
Dutch Neck; high land in Hopewell Township, Cumberland County	Bridgeton.
Dyer; cove projecting from Delaware River into Downe Township, Cumberland County	Bridgeton.
Dyer; creek in Downe Township, Cumberland County, flows into Delaware River	Bridgeton.
Eagle; point of land projecting from coast of West Deptford Township, Gloucester County, into Delaware River	Philadelphia.
Eagle; village in Shamong Township, Burlington County	Pemberton.
Eagle; bay in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Eagle Rock; village in West Orange Township, Essex County	Paterson.
Eagleswood; township in Ocean County; area, 35 square miles.	Little Egg Harbor. Long Beach.
Eagleswood; village in Perth Amboy Township, Middlesex County, on Raritan River	Plainfield.
East; creek in Dennis Township, Cape May County, flows *south into Delaware Bay*	Dennisville.

	Names of sheets.
East; point projecting from coast of Maurice River Township, Cumberland County, into Maurice River Cove	Maurice Cove.
East Amwell; township in Hunterdon County; area, 25 square miles	Lambertville.
East Branch. *See* Oswego River.	
East Brunswick; township in Middlesex County; area, 29 square miles	New Brunswick.
East Camden; village in Stockton Township, Camden County, at junction of Amboy division with Pennsylvania R. R	Philadelphia.
East Creek; village in Dennis Township, Cape May County.	Dennisville.
East Greenwich; township in Gloucester County; area, 14 square miles.	Chester. Philadelphia.
East Lake; village in Pilesgrove Township, Salem County, on Salem Creek	Salem.
ast Long Branch; village in Ocean Township, Monmouth County, on Atlantic Ocean and New York and Long Branch R. R	Sandy Hook.
ast Millstone; borough in Franklin Township, Somerset County, on Millstone River, and on Delaware and Raritan Canal, at terminus of Millstone Branch of Pennsylvania R. R.	Somerville. Princeton.
ast Orange; township in Essex County; area, 4 square miles.	Paterson. Staten Island.
ast Orange; village in East Orange Township, Essex County, on Morris and Essex Division of Delaware, Susquehanna and Western R. R	Paterson.
ast Point; channel in coast swamp in Galloway Township, Atlantic County	Atlantic City.
East Windsor; township in Mercer County; area, 17 square miles.	New Brunswick. Cassville. Princeton. Bordentown.
Easthampton; township in Burlington County; area, 6 square miles.	Burlington. Mount Holly. Bordentown. Pemberton.
Eatontown; township in Monmouth County; area, 12 square miles	Sandy Hook.
atontown; village in Eatontown Township, Monmouth County, at junction of two branches of New Jersey Southern R. R	Sandy Hook.
Eayrstown; village in Lumberton Township, Burlington County, on South Branch of Rancocas Creek	Mount Holly.
Echo Lake; village in West Milford Township, Passaic County	Greenwood Lake.
Eddy; creek in Upper Township, Cape May County, tributary to Job Creek	Great Egg Harbor.
dgar; village in Woodbridge Township, Middlesex County, on Perth Amboy Branch Pennsylvania R. R	Plainfield.
dge; cove projecting from Little Egg Harbor into Little Egg Harbor Township, Burlington County	Little Egg Harbor.
dgewater; village in Ridgefield Township, Bergen County, on Hudson River	Harlem.

	Names of sheets.
Edgewater Park; village in Burlington and Beverly townships, Burlington County, on Delaware River, and on Amboy Division Pennsylvania R. R	Burlington.
Edinburg; village in West Windsor Township, Mercer County, on Assanpink Creek	Princeton.
Edison; village in Sparta Township, Sussex County	Franklin.
Edward; run in Mantua Township, Gloucester County, tributary to Mantua Creek.	Philadelphia. Glassboro.
Egg; island in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Egg Harbor; township in Atlantic County; area, 112 square miles.	Great Egg Harbor. Atlantic City.
Egg Harbor; inlet projecting from Atlantic Ocean into Egg Harbor Township, Atlantic County	Atlantic City.
Egg Harbor; city in Atlantic County; area, 11 square miles..	Mullica.
Egg Island; light-house on coast of Downe Township, Cumberland County	Maurice Cove.
Egg Island; point projecting from coast of Egg Island into Delaware Bay	Maurice Cove.
Eight Mile Branch; brook in Stafford Township, Ocean County, flowing into Mill Creek.	Little Egg Harbor. Whitings.
Elberon; village in Ocean Township, Monmouth County, on New York and Long Branch R. R	Sandy Hook.
Elbow; beacon in Newark Bay	Staten Island.
Elisha Branch; brook in Plumstead and Jackson townships, Ocean County, flows into Gum Branch	Cassville.
Elizabeth; city in Union County; area, 13 square miles	Staten Island.
Elizabeth; river rising in Essex County, enters Union County and flows through Elizabeth City into Arthur Kill.	Paterson. Staten Island. Plainfield.
Elizabethport; part of Elizabeth City, at junction of Elizabeth River with Arthur Kill, on Newark Branch of Central R. R. of New Jersey	Staten Island.
Ellis; island off Jersey City in New York Upper Bay	Staten Island.
Ellisburg; village in Delaware Township, Camden County..	Philadelphia.
Ellisdale; village in New Hanover Township, Burlington County	Bordentown
Elm; village in Winslow Township, Camden County, on New Jersey Southern R. R	Hammonton.
Elmer; village in Pittsgrove Township, Salem County, on West Jersey R. R	Glassboro.
Elmora; village in Union Township, Union County, on Central R.R. of New Jersey	Staten Island.
Elmwood Road; village in Eversham Township, Burlington County	Mount Holly.
Elsinboro; township in Salem County; area, 13 square miles..	Salem.
Elsinboro; point projecting from Elsinboro Township, Salem County, into Delaware River	Wilmington.
Elsinboro Neck; peninsula extending from Elsinboro Township, Salem County, into Delaware River	Wilmington.
Elwood; village in Mullica Township, Atlantic County, on Philadelphia and Reading R. R	Mullica.
Emmelville; village in Hamilton Township, Atlantic County.	Tuckahoe.

	Names of sheets.
Emmons Station; village in Stillwater Township, Sussex County, on Paulins Hill, and on New York, Susquehanna and Western R. R.	Wallpack.
Englewood; township in Bergen County; area, 11 square miles.	Harlem. Paterson.
Englewood; village in Englewood Township, Bergen County, on Northern R. R. of New Jersey and on Overpeck Creek.	Harlem.
English; creek in Egg Harbor Township, Atlantic County, flows into Great Egg Harbor River	Great Egg Harbor.
English Creek; landing in Egg Harbor Township, Atlantic County, on English Creek	Great Egg Harbor.
English Creek; village in Egg Harbor Township, Atlantic County, on West Jersey R. R	Great Egg Harbor.
Englishtown; village in Manalapan Township, Monmouth County, on Freehold and Jamesburg R. R	New Brunswick.
Ephraim; swampy island in Lower Township, Cape May County	Cape May.
Ernston; village in Sayreville Township, Middlesex County, on Camden and Amboy R. R	New Brunswick.
Essex; county in north part of the State; area, 130 square miles.	Morristown. Paterson. Staten Island. Plainfield.
Essex; village in Belleville Township, Essex County, on Passaic River and on Paterson and Newark Branch of New York, Lake Erie and Western R. R.	Paterson.
Estellville; village in Weymouth Township, Atlantic County.	Great Egg Harbor.
Everittstown; village in Alexandria Township, Hunterdon County	Easton.
Evesboro; village in Evesham Township, Burlington County.	Mount Holly.
Evesham; township in Burlington County; area, 30 square miles	Mount Holly.
Evona; village; part of Plainfield City, Union County, on Central R. R. of New Jersey	Plainfield.
Ewan Mills; village in Harrison Township, Gloucester County	Glassboro.
Ewansville; station in Southampton Township, Burlington County, on Philadelphia and Long Branch R. R	Pemberton.
Ewing; township in Mercer County; area, 18 square miles..	Lambertville. Burlington.
Ewing; village in Ewing Township, Mercer County	Lambertville.
Ewing Neck; village in Maurice River Township, Cumberland County	Dennisville.
Ewingville; village in Ewing Township, Mercer County, on Shabakunk Creek	Lambertville
Extonville; village in Hamilton Township, Mercer County, on Crosswick Creek	Bordentown.
Factory Branch; brook in Lacey Township, Ocean County, tributary to Cedar Creek.	Whitings. Barnegat.
Fairfield; township in Cumberland County; area, 42 square miles.	Bridgeton. Bayside.
Fairfield; station in Howell Township, Monmouth County, on Freehold and Jamesburg R. R. (Pennsylvania R. R.) ..	Asbury Park.
Fairfield; village in Howell Township, Monmouth County..	Asbury Park.

	Names of sheets
Fairfield; village in northern part of Caldwell Township, Essex County	Morristown.
Fairhaven; village in Shrewsbury Township, Monmouth County, on Navesink River	Sandy Hook.
Fairhaven; village in Saddle River Township, Bergen County.	Paterson.
Fairmount; village in Tewksbury Township, Hunterdon County	High Bridge.
Fairmount; village in Midland Township, Bergen County, on New Jersey and New York R. R.	Paterson.
Fairton; village in Fairfield Township, Cumberland County, on Cohansey Creek	Bridgeton.
Fairview; village in South Harrison Township, Gloucester County	Glassboro.
Fairview; village in Ridgefield Township, Bergen County, on Northern R. R. of New Jersey	Paterson.
Fairview; village in Deptford Township, Gloucester County.	Philadelphia.
Fairview; village in Delran Township, Burlington County..	Burlington.
Fairview; village in Medford Township, Burlington County.	Mount Holly.
Fairview; village in Middletown Township, Monmouth County	Sandy Hook.
False Egg Island; point projecting from coast of Downe Township, Cumberland County, into Delaware Bay	Maurice Cove.
Fanwood; township in Union County; area, 10 square miles.	Plainfield.
Fanwood; village in Fanwood Township, Union County, on Central R. R. of New Jersey	Plainfield.
Farmersville; village in Tewksbury Township, Hunterdon County	High Bridge.
Farmingdale; village in Howell Township, Monmouth County, on Freehold and Jamesburg R. R. and the New Jersey Southern R. R	Asbury Park.
Feather Bed; brook in Woodland, Shamong, and Randolph townships, Burlington County, tributary to Talepehauken Brook.	Pemberton. Mullica.
Febletown; village in Hope Township, Warren County....	Hackettstown.
Fellowship; village in Mount Laurel Township, Burlington County	Mount Holly.
Feltville; village in New Providence Township, Union County	Plainfield.
Fenwick; creek in Mannington Township, Salem County, flows into Salem Creek	Salem.
Fenwick; village in Pilesgrove Township, Salem County ...	Salem.
Ferro Mont; village in Randolph Township, Morris County, on Chester Branch of Delaware, Lackawanna and Western R. R	Lake Hopatcong.
Fiddler; creek in Hopewell Township, Mercer County, tributary to Delaware River	Lambertville.
Fieldsboro; village in Bordentown Township, Burlington County, on Delaware River and on Pennsylvania R. R...	Bordentown.
Fieldville; village in Piscataway Township, Middlesex County, on Raritan River	Somerville.
Findern; village in Bridgewater Township, Somerset County, on Central R. R. of New Jersey	Somerville.
Finesville; village in Pohatcong Township, Warren County, *on Musconetcong* River	Easton.
Finley; station in Deerfield Township, on West Jersey R. R.	Bridgeton.

	Names of sheets.
inns; point projecting from Lower Penns Neck Township, Salem County, into Delaware River	Wilmington.
irst; river tributary to Passaic River flowing through Newark City, Essex County.	Staten Island. Paterson.
irst Watchung; the outlying ridge of the Appalachian Mountains, runs through Passaic and Essex, Union and Somerset counties.	Paterson. Morristown. Plainfield. Somerville.
ish Factory; village in Egg Harbor Township, Atlantic County, on Great Egg Harbor	Great Egg Harbor.
ish House Station; village in Stockton Township, Camden County, on Delaware River and on Pennsylvania R. R.	Philadelphia.
ishing; creek rising in Middle Township, flowing southwesterly, passing through northwest corner of Lower Township, Cape May County, into Delaware Bay	Dennisville.
ishing; creek in Lower Alloways Creek Township, Salem County, flows into Stony Inlet	Bayside.
ishing; creek in Greenwich Township, Cumberland County, flows into Delaware River	Bayside.
ishing; creek, passage in coast swamp in Downe Township, Cumberland County	Maurice Cove.
ishing Creek; village in Middle township, Cape May County	Dennisville.
ive Acre; pond near central part of Weymouth township, Atlantic County	Tuckahoe.
ivemile; beach along coast of Lower and Middle townships, Cape May County	Cape May.
ive Points; station on Philadelphia and Reading R. R., in Harrison Township, Gloucester County	Glassboro.
agtown (Frankfort, P. O.); village in Hillsboro Township, Somerset County	Somerville.
anders; village in Mount Olive Township, Morrison County, on Drakes Brook and on High Bridge Branch of Central R. R., of New Jersey	Lake Hopatcong.
lat; island in Little Egg Harbor, Stafford Township, Ocean County	Long Beach.
lat; creek, passage in coast swamp in Stafford Township, Ocean County, flows into Manahawken Bay	Long Beach.
lat; creek in Raritan and Holmdel Townships, Monmouth County, flows into Raritan Bay	Sandy Hook.
lat; creek in Upper Township, Cape May County, flows into Tuckahoe River	Great Egg Harbor.
lat; brook formed by two branches, Little Flat and Big Flat Brooks; is in Sandstone and Wallpack townships, Sussex County, and flows into Delaware River	Wallpack.
lat Creek; passage in coast swamp in Upper Township, Cape May County	Sea Isle.
latbrookville; village in Wallpack Township, Sussex, County, on Delaware River	Wallpack.
emington; town in Raritan Township, Hunterdon County, on Flemington Branch Lehigh Valley R. R., on South Branch R. R. and on Flemington Branch of Belvidere Division, Pennsylvania R. R	High Bridge.

	Names of sheets.
Flemington Junction; village in Raritan Township, Hunterdon County, at junction of Flemington Branch with Lehigh Valley R. R.	High Bridge.
Florence; township in Burlington County; area, 10 square miles	Burlington.
Florence; village in Winslow Township, Camden County, on Philadelphia and Reading R. R.	Hammonton.
Florence; village in Florence Township, Burlington County.	Burlington.
Florida Grove; village in Woodbridge Township, Middlesex County, on Raritan River	Plainfield.
Flyat; village in Shamong Township, Burlington County	Mount Holly.
Ford Corners; village in Raritan and Woodbridge townships, Middlesex County, on Lehigh Valley R. R.	Plainfield.
Fordville; village in Bridgeton Township, Cumberland County	Bridgeton.
Forest Grove; village in Franklin Township, Gloucester County	Hammonton.
Forked; river heading in three branches, North, Middle and South Branches, flows through Ocean County into Barnegat Bay.	Whitings. Barnegat.
Forked Branch; brook in Manchester Township, Ocean County, tributary to Old Hurricane Brook	Whitings.
Forked River; hills in Lacey Township, Ocean County; elevation, 150, 180, 170 and 182 feet, respectively	Whitings.
Forked River; village in Lacey Township, Oceon County, on New Jersey Southern R. R.	Barnegat.
Forked River; life-saving station on Island Beach in Lacey Township, Ocean County	Barnegat.
Formosa Bogs; marsh in Upper Township, Cape May County	Dennisville.
Fort Lee; town in Ridgefield Township, Bergen County, on Hudson River	Harlem.
Fortesque; creek in Downe Township, Cumberland County, flows into Delaware Bay	Maurice Cove.
Fortesque; village on coast of Downe Township, Cumberland County	Maurice Cove.
Fortesque Neck; peninsula in coast swamp in Downe Township, Cumberland County	Bridgeton.
Foster Run; brook in Deerfield Township, Cumberland County; flows into Cohansey Creek.	Bridgeton. Bayside.
Fostertown; village in Lumberton Township, Burlington County	Mount Holly.
Foulertown; brook in Livingston Township, Essex County, tributary to Passaic River	Morristown.
Fountain Green; village in New Hanover Township, Burlington County	Bordentown.
Fourmile; village in Woodland Township, Burlington County	Pemberton.
Fourmile Branch; brook on boundary between Winslow Township, Camden County, and Monroe Township, Gloucester County; flows into Great Egg Harbor River	Hammonton.
Fourmile Branch; brook in Stafford Township, Ocean County; flows into Mill Creek.	Little Egg Harbo Whitings.
Fox; hill in Washington Township, Morris County, and Tewksbury Township, Hunterdon County; greatest elevation being 1,026 feet	High Bridge.

	Names of sheets.
Fox Chase; village in Southampton and Shamong townships, Burlington County	Pemberton.
Francis Mills; village in Jackson Township, Ocean County.	Cassville.
Frankford; township in Sussex County; area, 37 square miles.	Wallpack. Franklin.
Franklin; township in Warren County; area, 24 square miles.	Delaware Water Gap. Easton. High Bridge.
Franklin; township in Hunterdon County; area, 23 square miles	High Bridge.
Franklin; township in Gloucester County; area, 58 square miles.	Hammonton. Glassboro.
Franklin; township in Essex County; area, 3 square miles ..	Paterson.
Franklin; township in Somerset County; area, 47 square miles.	Somerville. Plainfield. New Brunswick. Princeton.
Franklin; township in Bergen County; area, 29 square miles	Ramapo. Paterson. Morristown. Greenwood Lake.
Franklin; village in Franklin Township, Essex County, on Paterson and Newark Branch of New York, Lake Erie and Western R. R	Paterson.
Franklin; village in Caldwell Township, Essex County	Morristown.
Franklin; village in Rockaway Township, Morris County, on Delaware, Lackawanna and Western R. R	Lake Hopatcong.
Franklin; lake in Franklin Township, Bergen county	Paterson.
Franklin Corner; village in Lawrence Township, Mercer County, on Delaware and Raritan Canal and on Shipetaukin Creek	Princeton.
Franklin Furnace; village in Hardiston Township, Sussex County, on Sussex R. R	Franklin.
Franklin Junction; village in Hardiston Township, Sussex County	Franklin.
Franklin Park; village in South Brunswick Township, Middlesex County	Princeton.
Franklin Park; village in North Brunswick Township, Middlesex County, on Pennsylvania R. R	New Brunswick.
Franklinville; village in Franklin Township, Gloucester County, on West Jersey R. R	Glassboro.
Fredon; village in Stillwater Township, Sussex County	Wallpack.
Freehold; township in Monmouth County; area, 41 square miles.	Cassville. Asbury Park. New Brunswick.
Freehold; town in Freehold Township, Monmouth County, at junction of Freehold and Jamesburg and Freehold and New York railroads	New Brunswick.
Frelinghuysen; township in Warren County; area, 24 square miles.	Wallpack. Hackettstown.
Frenchtown; borough in Hunterdon County, on Delaware River, at junction of Nishisakawick Creek, and on Pennsylvania R. R., Belvidere Division	Easton

	Names of sheets.
Fresh Ponds; village in South Brunswick Township, Middlesex County	New Brunswick.
Friendship; creek in Woodland, Shamong, and Southampton townships, Burlington County; flows into Cedar Run	Pemberton.
Friendship; village in Upper Pittsgrove Township, Salem County	Glassboro.
Friendship; village in Deerfield Township, Cumberland County	Bridgeton.
Friendship; village in Woodland Township, Burlington County, on Friendship Creek	Pemberton.
Friendship Bogs; village in Randolph Township, Burlington County	Mullica.
Fries Mills; village in Maurice River Township, Cumberland County, on Manumuskin River	Tuckahoe.
Fries Mills; village in Franklin Township, Gloucester County	Glassboro.
Friesburg; village in Alloways Township, Salem County	Salem.
Fruit Growers Union; village in Hammonton Township, Camden County	Hammonton.
Furnace; brook in Oxford Township, Warren County, tributary to Pequest River.	Delaware Water Gap. Hackettstown.
Galloway; township in Atlantic County; area, 136 square miles.	Great Egg Harbor. Little Egg Harbor. Mullica. Atlantic City.
Game; creek in Oldmans and Upper Penns Neck townships, Salem County; flows into Salem Creek	Salem.
Gander; brook in Manalapan Township, Monmouth County; flows into Still House Brook.	New Brunswick. Cassville.
Garfield; town in Saddle River Township, Bergen County, at junction of Saddle and Passaic rivers, and on New York, Lake Erie and Western R. R	Paterson.
Garret; hill in Middletown Township, Monmouth County; elevation, 208 feet	Sandy Hook.
Garret Rock; hill south of Paterson City, Passaic County; altitude, 490 feet	Paterson.
Garton; village in Deerfield Township, Cumberland County, on New Jersey Southern R. R	Bridgeton.
Gaskin Branch; brook in Jackson Township, Ocean County; flows into Toms River	Cassville.
Gates Branch; brook in Woodland and Randolph townships, Burlington County, tributary to West Branch of Wading River.	Pemberton. Mullica.
Gaunt; brook in Manchester Township, Ocean County, and Pemberton Township, Burlington County, tributary to Cranberry Brook.	Whitings. Pemberton.
Genesis; bay in Middle Township, Cape May County, flowing into Jenkins Sound	Dennisville.
Georgetown; village in Mansfield Township, Burlington County, on Bacon Run	Bordentown.
Georgia; village in Freehold Township, Monmouth County	Cassville.
German Valley; village in Washington Township, Morris County, on South Branch of Raritan River and High Bridge Branch of New Jersey Central R. R	Hackettstown.

	Names of sheets.
Germania; village in Galloway Township, Atlantic County, on Camden and Atlantic R. R.	Mullica.
Germany Flats; valley in Sparta and Andover townships, Sussex County	Franklin.
Gibbsboro; village in Waterford Township, Camden County.	Mount Holly.
Gibbstown; village in Greenwich Township, Gloucester County, on Delaware River R. R	Chester.
Giberson Mills; village in Manchester Township, Ocean County, on Wrangel Brook	Whitings.
Gibson; landing in Weymouth Township, Atlantic County, on Great Egg Harbor	Great Egg Harbor.
Gibson; creek in Weymouth Township, Atlantic County; flows into Great Egg Harbor.	Tuckahoe. Great Egg Harbor.
Gifford Mill Branch; brook in Little Egg Harbor Township, Burlington County, tributary to Tuckerton Creek	Little Egg Harbor.
Gillette; village in Passaic Township, Morris County, on Passaic River and on Passaic and Delaware R. R	Plainfield.
Gillmore; island in Barnegat Bay, off coast of Dover Township, Ocean County	Barnegat.
Glades, The; marshy tract of land in Downe Township, Cumberland County	Bridgeton.
Glassboro; township in Gloucester County; area, 11 square miles	Glassboro.
Glassboro; village in Glassboro Township, Gloucester County, on Philadelphia and Reading R. R.	Glassboro.
Glen Gardner; village in Lebanon Township, Hunterdon County, on Delaware, Lackawanna and Western R. R ...	High Bridge.
Glen Ridge; village in Bloomfield Township, Essex County, on Bloomfield Branch of Delaware, Lackawanna and Western, and New York and Greenwood Lake R. Rs.	Paterson.
Glen Rock; village in Ridgewood Township, Bergen County, on New York, Lake Erie and Western R. R.	Paterson.
Glendale; village in Waterford Township, Camden County.	Mount Holly.
Glenmoore; village in Hopewell Township, Mercer County.	Lambertville.
Glenwood; village in Vernon Township, Sussex County	Goshen.
Gloucester; county in southwest part of State; area, 339 square miles.	Philadelphia. Chester. Salem. Glassboro. Hammonton.
Gloucester; township in Camden County; area, 37 square miles.	Mount Holly. Philadelphia. Hammonton.
Gloucester; city in Camden County, on Delaware River and on West Jersey R. R	Philadelphia.
Gloucester; village in Egg Harbor City, Atlantic County...	Mullica.
Gloucester; lake in Egg Harbor City, Atlantic County, an enlargement of Indian Cabin Creek	Mullica.
Glover; pond in Frelinghuysen Township, Warren County..	Hackettstown.
Goffle; village in Manchester Township, Passaic County, on Goffle Brook	Paterson.
Goffle; brook rising in Franklin Township, Bergen County; flows south through eastern part of Manchester Township, Passaic County, into Passiac River	Paterson.

	Names of sheets.
Gold; run in Ewing Township, Mercer County, tributary to Delaware River	Lambertville.
Golden Thorofare; passage in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Good Intent; village in Deptford Township, Gloucester County, on South Branch of Timber Creek	Philadelphia.
Goodluck; village in Lacey Township, Ocean County	Barnegat.
Goodluck; point of land projecting into coast swamp in Berkeley Township, Ocean County	Barnegat.
Goodluck; island in Little Egg Harbor, in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Goodwater; brook in Manchester Township, Ocean County, tributary to Old Hurricane Brook	Whitings.
Goodwater Run; brook in Washington Township, Burlington County, flowing into Batsto River	Mullica.
Goodwater Run; brook in Woodland Township, Burlington County; flows into Governors Hill Brook.	Whitings. Pemberton.
Goose; pond in Manchester Township, Ocean County	Whitings.
Goose; pond in Woodland Township, Burlington County	Whitings.
Goose; creek in Dover Township, Ocean County; flows into into Barnegat Bay	Barnegat.
Goshen; creek in Middle Township, Cape May County; flows into Delaware Bay	Dennisville.
Goshen; landing in Middle Township, Cape May County, on Goshen Creek	Dennisville.
Goshen; village in Middle Township, Cape May County	Dennisville
Gouldtown; village in Bridgeton Township, Cumberland County	Bridgeton
Governor Branch; brook in Bass River and Little Egg Harbor townships, Burlington County; flows into Westecunk Creek	Little Egg Harbor.
Governors Hill; brook in Woodland Township, Burlington County, tributary to Gates Branch of Wading River	Pemberton.
Granney; creek in Dennis Township, Cape May County, flowing into Main Channel	Sea Isle.
Granton; village in North Bergen Township, Hudson County.	Paterson.
Grassy; bay in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Grassy Sound; channel in Middle Township, Cape May County, connecting Dead Thorofare with Grassy Sound.	Dennisville.
Grassy; pond in Weymouth Township, Atlantic County	Tuckahoe.
Grassy; sound in Middle and Lower townships, Cape May County.	Cape May. Dennisville.
Gravel Hill; village in Monroe Township, Middlesex County.	New Brunswick.
Gravelly Run; brook in Downe and Millville townships, Cumberland County	Bridgeton.
Gravelly Run; village in Hamilton Township, Atlantic County	Great Egg Harbor.
Gravelly Run; brook in Hamilton Township, Atlantic County; flows into Great Egg Harbor River	Great Egg Harbor.
Gravelly Run; passage in coast swamp in Middle Township, Cape May County	Dennisville.
Graven Thorofare; passage in coast swamp in Middle Township, Cape May County	Sea Isle.

	Names of sheets.
Great; bay forming partial boundary between Little Egg Harbor Township, Burlington County, and Galloway Township, Atlantic County	Atlantic City.
Great; channel in Lower Township, Cape May County, connecting Heretford Inlet with Great Sound	Dennisville.
Great; island in swamp east of Elizabeth City, Union County	Staten Island.
Great; sound in Middle Township, Cape May County, flowing into Great Channel	Dennisville.
Great; swamp in Hammonton Township, Atlantic County.	Hammonton. Mullica.
Great; swamp in Passaic and Chatham townships, Morris County	Plainfield.
Great Beds; light-house in Raritan Bay	New Brunswick.
Great Cedar; swamp in Dennis and Upper townships, Cape May County.	Dennisville. Great Egg Harbor. Sea Isle.
Great Ditch; brook in South Brunswick Township, Middlesex County, tributary to Lawrence Brook.	Princeton. New Brunswick.
Great Egg; harbor, an inlet of the Atlantic Ocean, on coast of Upper Township, Cape May County, and of Weymouth and Egg Harbor townships, Atlantic County	Great Egg Harbor.
Great Egg; life-saving station on Absecon Beach	Great Egg Harbor.
Great Egg Harbor; river rising in Gloucester Township, Camden County; flows on boundary between Camden and Burlington counties, then across Atlantic County into Great Egg Harbor.	Mount Holly. Great Egg Harbor. Hammonton.
Great Flat Thorofare; passage in coast swamp in Middle Township, Cape May County	Dennisville.
Great Notch; village in Little Falls Township, Passaic County, on New York and Greenwood Lake R. R	Paterson.
Great Piece; meadows in Caldwell Township, Essex County.	Morristown.
Great Swamp Branch; brook in Winslow Township, Camden County, and Hammonton Township, Atlantic County; flows into Nescochaque Creek.	Hammonton. Mullica.
Great Thorofare; passage in coast swamp in Egg Harbor Township, Atlantic County	Atlantic City.
Great Thorofare; passage in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Greater Cross Roads; village in Bedminster Township, Somerset County, on Middle Brook	Somerville.
Green; township in Sussex County; area, 21 square miles	Wallpack. Hackettstown. Lake Hopatcong.
Green; brook, tributary to Raritan River, rises in North Plainfield Township, Somerset County, and forms boundary between Union, Middlesex, and Somerset counties.	Plainfield. Somerville.
Green (or Lawrence); brook in Maurice River Township, Cumberland County, flowing into Tuckahoe River	Tuckahoe.
Green; brook in Dover and Brick townships, Ocean County, tributary to Kettle Creek	Asbury Park.
Green; brook in Caldwell Township, Essex County, tributary to Deepavaal Brook	Morristown.

	Names of sheets.
Green; mines in eastern part of Vernon Township, Sussex County	Greenwood Lake.
Green; creek in Middle Township, Cape May County, flowing into Delaware Bay	Dennisville.
Green; pond in Hope Township, Warren County	Hackettstown.
Green; pond in Rockaway Township, Morris County, on boundary of Jefferson Township.	Greenwood Lake. Franklin. Lake Hopatcong. Morristown.
Green; village in Passaic Township, Morris County	Plainfield.
Green; village in Greenwich Township, Gloucester County, on Delaware River R. R	Chester.
Green Bank; village on boundary line between Randolph and Washington townships, Burlington County	Mullica.
Green Branch; brook in Manchester Township, Ocean County, tributary to Wrangel Brook	Whitings.
Green Creek; village in Middle Township, Cape May County.	Dennisville.
Green Grove; village in Shrewsbury Township, Monmouth County	Asbury Park.
Green Island; village in Dover Township, Ocean County, on Barnegat Bay	Asbury Park.
Green Pond; range of mountains extending along eastern boundary of Jefferson Township, Morris County.	Lake Hopatcong. Franklin. Greenwood Lake.
Green Pond; brook in Rockaway Township, Morris County, flows into Rockaway River	Lake Hopatcong.
Green Pond; mines in Rockaway Township, Morris County.	Greenwood Lake.
Green Tree; village in Washington Township, Gloucester County	Philadelphia.
Greenland; village in Gloucester Township, Camden County.	Philadelphia.
Greensville; village in Green Township, Sussex County	Hackettstown.
Greenville; village in Pittsgrove Township, Salem County	Glassboro.
Greenville; village in northern part of Rockaway Township, Morris County	Morristown.
Greenville; part of Jersey City on Hackensack River, on New York Upper Bay and on Central R. R. of New Jersey.	Staten Island.
Greenwich; township in Warren County; area, 11 square miles	Easton.
Greenwich; township in Gloucester County; area, 15 square miles.	Chester. Philadelphia
Greenwich; township in Cumberland County; area, 19 square miles	Bayside.
Greenwich; village in Greenwich Township, Cumberland County	Bayside.
Greenwood; lake extending into West Milford Township Passaic County, and into New York	Greenwood Lake.
Griggstown; village in Franklin Township, Somerset County, on Millstone River and on Delaware and Raritan Canal	Princeton.
Gromakill; creek in North Bergen Township, Hudson County, tributary to Hackensack River	Paterson.
Ground Hog; brook in Howell Township, Monmouth County, flows into Polypod Brook	Asbury Park.
Grove Street; village in East Orange Township, Essex County, on Morris and Essex Division of Delaware, Lackawanna and Western R. R	Paterson.

	Names of sheets.
Grovers Mill; village in West Windsor Township, Mercer County, on Bear Brook	Princeton.
Groverville; village in Hamilton Township, Mercer County, on Crosswick Creek	Bordentown.
Gulf; point projecting from Union Township, Ocean County, into Barnegat Bay	Long Beach.
Gull; swampy island in Middle Township, Cape May County, surrounded by waters of Great Sound and Cresse Thorofare	Dennisville.
Gull Bar; marshy island in Hereford Inlet, in Middle Township, Cape May County	Dennisville.
Gull Island Thorofare; passage in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Gum; brook in Brick Township, Ocean County, flows into Metedeconk River	Asbury Park.
Gum Branch; brook in Plumstead and Jackson townships, Ocean County, flows into Ridgway Branch	Cassville.
Gum Spring; brook tributary to Burrs Mill Brook, in Woodland Township, Burlington County	Pemberton.
Gun Branch; brook in Waterford Township, Camden County, and Hammonton Township, Atlantic County, tributary to Mechesactauxin Branch of Mullica River.	Hamonton. Mullica.
Gunning; river in coast swamp in Stafford and Union townships, Ocean County	Long Beach.
Guttenberg; town in Hudson County, on Hudson River	Harlem. Paterson.
Hackensack; town, coextensive with new Barbadoes Township, Bergen County, on Hackensack River and on New Jersey and New York R. R	Paterson.
Hackensack; river rising in Rockland County, runs southward through Bergen and Hudson counties into Newark Bay.	Tarrytown. Ramapo. Harlem. Paterson. Staten Island.
Hackettstown; town in Independence Township, Warren County, on Musconetcong River and on Delaware, Lackawanna and Western R. R	Hackettstown.
Hacklebarney; village in Chester Township, Morris County, on Black River and on Chester Branch of Delaware, Lackawanna and Western R. R	Lake Hopatcong.
Haddon; township in Camden County; area, 12 square miles.	Philadelphia.
Haddonfield; borough in Haddon Township, Camden County, on Camden and Atlantic R. R	Philadelphia.
Hagerstown; village in Lower Alloways Creek Township, Salem County	Salem.
Hainesburg; village in Knowlton Township, Warren County, on Paulins Kill and on New York, Susquehanna and Western R. R	Delaware Water Gap.
Hainesport; village in Lumberton Township, Burlington County, on Rancocas Creek and on Pennsylvania R. R	Mount Holly.
Hainesville; village in Sandyston Township, Sussex County, on Little Flat Brook	Milford.
Hakihokake; creek rising in Alexandria Township, flows into Delaware River in southeast part of Holland Township, Hunterdon County	Easton.

	Names of sheets.
Haleyville; village in Commercial Township, Cumberland County	Bridgeton.
Half Acre; village in Monroe Township, Middlesex County.	New Brunswick.
Halfway; creek in Upper Township, Cape May County, tributary to Cedar Swamp Creek	Great Egg Harbor.
Haledon; village in Manchester Township, Passaic County, on Oldham Brook	Paterson.
Halifax; village in Hohokus Township, Bergen County	Ramapo.
Hall Run; brook in Mannington Township, Salem County, flows into Mannington Creek	Salem.
Halltown; village in Mannington Township, Salem County,	Salem.
Halsey; island off western coast of Jefferson Township, Morris County, and eastern coast Byram Township, Sussex County, in Lake Hopatcong	Lake Hopatcong.
Ham; island in Little Egg Harbor, Eagleswood Township, Ocean County	Long Beach.
Hamburg; town in Hardyston Township, Sussex County, on Walkill River and at junction of New York, Susquehanna and Western R. R. and Lehigh and Hudson River R.R.	Franklin.
Hamden; village in Clinton Township, Hunterdon County, on South Branch of Raritan River and on Lehigh Valley R. R.	High Bridge.
Hamilton; township in Mercer County; area, 41 square miles.	Princeton. Bordentown. Burlington.
Hamilton; township in Atlantic County; area, 114 square miles.	Hammonton. Mullica. Great Egg Harbor. Tuckahoe.
Hamilton Square; village in Hamilton Township, Mercer County	Bordentown.
Hamilton Station; village in Hillsboro Township, Somerset County, on Philadelphia and Reading R. R	Somerville.
Hammock; cove projecting from Little Bay, in Galloway Township, Atlantic County	Atlantic City.
Hammonton; township in Atlantic County; area, 45 square miles	Mullica.
Hammonton; town in Hammonton township, Atlantic County, on Camden and Atlantic R. R	Hammonton.
Hammonton; creek in Hammonton and Mullica townships, Atlantic County, flows into Mullica River	Mullica.
Hammon Branch; brook in Hammonton and Mullica townships, Atlantic County, flows into Hammonton Creek.	Hammonton. Mullica.
Hampton; township in Sussex County; area, 30 square miles	Wallpack. Franklin.
Hampton Furnace; village in Shamong Township, Burlington County	Pemberton.
Hampton Gate; village in Shamong Township, Burlington County, on Batsto River	Pemberton.
Hance Bridge; village in Landis Township, Cumberland County	Tuckahoe.
Hancock Bridge; village in Lower Alloways Creek Township, Salem County	Salem.
Hanks; pond in West Milford Township, Passaic County	Greenwood Lake.
Hanover; township in Morris County; area, 52 square miles	Morristown. Lake Hopatcong.

	Names of sheets.
Hanover; station in Pemberton Township, Burlington County, on Philadelphia and Long Branch R. R.	Pemberton.
Hanover; village in Hanover Township, Morris County	Morristown.
Hanover Furnace; village in Pemberton Township, Burlington County	Pemberton.
Hanover Neck; village in Hanover Township, Morris County.	Morristown.
Hansey; creek in Commercial and Downe townships, Cumberland County, flows into Dividing Creek	Maurice Cove.
Harbourton; village in Hopewell Township, Mercer County	Lambertville.
Hardenberg Corners; village in East Brunswick Township, Middlesex County	New Brunswick.
Harding; village in Clayton Township, Gloucester County, on West Jersey R. R.	Glassboro.
Hardingville; village in Clayton Township, Gloucester County	Glassboro.
Hardyston; township in Sussex County; area, 39 square miles.	Franklin. Greenwood Lake.
Hardystonville; village in Hardyston Township, Sussex County, on Walkill River, and on New York, Susquehanna and Western R. R.; also on Lehigh and Hudson River R. R.	Franklin.
Hardwick; township in Warren County; area, 18 square miles.	Wallpack. Hackettstown.
Hardwick; village in Hardwick Township, Warren County, on Blair Creek	Wallpack.
Hardwick Center; village in Hardwick Township, Warren County, on Blair Creek	Wallpack.
Harihokake; creek in Alexandria Township, Hunterdon County, tributary to the Delaware River	Easton.
Harlingen; village in Montgomery Township, Somerset County	Princeton.
Harmersville; village in Lower Alloways Creek Township, Salem County	Bayside.
Harmony; township in Warren County; area, 24 square miles.	Delaware Water Gap. Easton.
Harmony; village in Hopewell Township, Cumberland County	Salem.
Harmony; village in Harmony Township, Warren County, on Delaware River, and on Belvidere Division, Pennsylvania R. R.	Delaware Water Gap.
Harmony; village in Harmony Township, Warren County	Easton.
Harrington; township in Bergen County; area, 27 square miles.	Tarrytown. Harlem. Paterson. Ramapo.
Harris; station in Woodland Township, Burlington County, on New Jersey Southern R. R.	Pemberton.
Harris Branch; brook in Jackson Township, Ocean County, flows into Ridgeway Branch	Cassville.
Harrison; township in Gloucester County; area, 19 square miles.	Glassboro. Salem.
Harrison; town in Hudson County, on Passaic River	Paterson. Staten Island.
Harrison; brook in Bernard Township, Somerset County, tributary to Dead River	Somerville.

	Names of sheets.
Harrison Pond Branch; brook in Plumstead and Jackson townships, Ocean County, flows into Gum Branch	Cassville.
Harrisonville; village in Lower Penns Neck Township, Salem County	Salem.
Harrisonville; station in South Harrison Township, Gloucester County, on West Jersey R. R.	Salem.
Harrisville; village in South Harrison Township, Gloucester County	Salem.
Harrisville; village in Bass River Township, Burlington County, on Wading River	Mullica.
Harrow Run; brook in Deerfield Township, Cumberland County, flows into Cohansey Creek	Glassboro. Bayside.
Hartford; village in Mount Laurel Township, Burlington County, on Pennsylvania R.R	Mount Holly.
Harvey Cedars; village on beach in Union Township, Ocean County, and on Long Beach R. R	Long Beach.
Harvey Cedars; life saving station on coast of Union Township, Ocean County	Long Beach.
Harvey Sedges; islands in Union Township, Ocean County, in Manahauken Bay	Long Beach.
Hatfield; swamp along Passaic River in Livingston and Caldwell townships, Essex County	Morristown.
Haven; point projecting from Brick Township, Ocean County, into Barnegat Bay	Asbury Park
Haven; cove projecting from Barnegat Bay into Brick Township, Ocean County	Asbury Park.
Hawthorne; village in Manchester Township, Passaic County, on Passaic River, on New York, Lake Erie and Western R. R., and on New York, Susquehanna and Western R. R.	Paterson.
Hay Cut; brook in Downe Township, Cumberland County, flows into Nantuxent Creek	Bridgeton.
Hay Stack; brook in Howell Township, Monmouth County, flows into Metedeconk River	Asbury Park.
Haynes; creek tributary to Rancocas Creek, in Medford and Lumberton Townships, Burlington County	Mount Holly.
Hazen; post-office of Oxford Church, in Oxford Township, Warren County, on Pophandusing Brook	Delaware Water Gap
Hazlet; village in Raritan Township, Monmouth County, on New York and Long Branch R. R	Sandy Hook.
Head of River; village in Weymouth Township, Atlantic County, on Tuckahoe River	Tuckahoe.
Headleytown; village in Union Township, Union County	Plainfield.
Headquarters; village in Delaware Township, Hunterdon County	Lambertville.
Heard; brook in Woodbridge Township, Middlesex County, tributary to Woodbridge Creek	Plainfield.
Hedger House; village in Woodland Township, Burlington County	Pemberton.
Heislerville; village in Maurice River Township, Cumberland County	Dennisville.
Helmetta; village in East Brunswick Township, Middlesex County, on Camden and Amboy R. R	New Brunswick.
Hendersons; cove, an arm of Lake Hopatcong indenting coast between Byram Township, Sussex County, and Jefferson township, Morris County	Lake Hopatcong.

	Names of sheets.
Hendricks; island off coast of Delaware Township, Hunterdon County, in Delaware River.	Doylestown. Lambertville.
Hensfoot; village in Union Township, Hunterdon County ...	High Bridge.
Herbertsville; village in Brick Township, Ocean County..	Asbury Park.
Hereford; inlet extending from the Atlantic Ocean into coast of Middle Township, Cape May County	Dennisville.
Hereford; light-house on coast of Middle Township, Cape May County..	Dennisville.
Hereford Inlet; life saving-station on coast of Middle Township, Cape May County	Dennisville.
Herman; village in Washington Township, Burlington County, on Bull Creek	Mullica.
Herring; island in Metedeconk River, in Brick Township, Ocean County	Asbury Park.
Hesstown; village in Maurice River Township, Cumberland County	Tuckahoe.
Hetty; creek in Middle Township, Cape May County, flowing into Genesis Bay.....................................	Dennisville.
Hewett; village in West Milford Township, Passaic County, on Wanaque River and on New York and Greenwood Lake R. R	Greenwood Lake.
Hewitt; pond in Andover Township, Sussex County	Franklin.
Hewittville; village in Galloway Township, Atlantic County	Great Egg Harbor. Atlantic City.
Hibernia; village in Rockaway Township, Morris County, on Hibernia Brook and on Hibernia Mine R. R...............	Morristown.
Hibernia; brook in Rockaway Township, Morris County, tributary to Beaver Brook.	Morristown. Lake Hopatcong.
Higbee; landing on coast of Lower Township, Cape May County	Cape May.
Higbeeville; village in Galloway Township, Atlantic County.	Little Egg Harbor.
High; island in Little Egg Harbor in Stafford Township, Ocean County	Long Beach.
High; mountain in Manchester Township, Passaic County; altitude, 879 feet	Paterson.
High Bank; landing on Great Egg Harbor River in Weymouth Township, Atlantic County	Great Egg Harbor.
High Bridge; township in Hunterdon County; area, 18 square miles	High Bridge.
High Bridge; village in High Bridge Township, Hunterdon County, on South Branch of Raritan River at junction of Delaware, Lackawanna and Western R. R. with High Bridge Branch of Central R. R. of New Jersey and the Central R. R. of New Jersey	High Bridge.
High Point; mountain in Montague and Wantage Townships, Sussex County; altitude, 1,809 feet......................	Port Jervis.
Highland Beach; village in Middletown Township, Monmouth County	Sandy Hook.
Highland Park; town in Raritan Township, Middlesex County, on Raritan River and on Pennsylvania R. R......	New Brunswick.
Highlands; village on reef in Middletown Township, Monmouth County, on New York and Long Branch R. R.....	Sandy Hook.
Highlands of Navesink; hills in Middleton Township, Monmouth County; highest summit, 275 feet.................	Sandy Hook.

	Names of sheets.
Hightstown; borough in Mercer County, on Millstone River and on Pennsylvania R. R., Amboy division	Princeton.
Highwood; village in Englewood and Palisade townships, Bergen County, on Northern R. R. of New Jersey	Harlem.
Hill Crest; village in Ewing Township, Mercer County, on Trenton branch, New York Division, Philadelphia and Reading R. R.	Burlington.
Hillsboro; Township in Somerset County; area 58 square miles.	High Bridge. Lambertville. Princeton. Somerville.
Hillsboro; village in Hillsboro Township, Somerset County, on Lehigh Valley R. R.	Princeton. Somerville.
Hillsdale; village in Marlboro Township, Monmouth County.	Sandy Hook.
Hillsdale; village in Washington Township, Bergen County, on Pascack Creek and on New Jersey and New York R. R.	Ramapo.
Hither; island in Little Egg Harbor, in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Hilton; village in South Orange and Clinton Townships, Essex County.	Staten Island. Plainfield.
Hoboken; city in Hudson County, on Hudson River, north of Jersey City.	Paterson. Staten Island.
Hockamick; village in New Hanover Township, Burlington County, on South Run	Bordentown.
Hockhockson; swamp in Atlantic Township, Monmouth County	Sandy Hook.
Hockhockson; brook in Atlantic Township, Monmouth County, tributary to Pine Brook	Sandy Hook.
Hoffman; station on Freehold and Jamesburg R. R., in Monroe Township, Middlesex County	New Brunswick.
Hog; islands in Mullica River, in Randolph Township, Burlington County	Mullica.
Hohokus; creek rising in Franklin Township, flows into Saddle River, in Ridgewood Township, Bergen County.	Ramapo. Paterson.
Hohokus; township in Bergen County; area, 30 square miles.	Ramapo.
Hohokus; village in Orvil Township, Bergen County, on Hohokus Creek and on New York, Lake Erie and Western R. R	Ramapo.
Holcombe; island off coast of Hunterdon County, opposite Lambertville City, in Delaware River	Lambertville.
Holland; township in Hunterdon County; area, 25 square miles	Easton.
Holland; village in Hardyston Township, Sussex County	Franklin.
Holland Station; village in Holland Township, Hunterdon County, on Delaware River and on Pennsylvania R. R., Belvidere Division	Easton.
Holland; brook rising in Readington Township, Hunterdon County, flows into South Branch of Raritan River, in Branchburg Township, Somerset County.	Somerville. High Bridge.
Holly Beach; borough in Lower Township, Cape May County.	Cape May.
Holly Beach; life-saving station on coast of Lower Township, Cape May County	Cape May.
Holmansville; village in Jackson Township, Ocean County, on Toms River	Cassville.

	Names of sheets.
Holmdel; township in Monmouth County; area 18 square miles	Sandy Hook.
Holmdel; village in Holmdel Township, Monmouth County.	Sandy Hook.
Home Run; brook in Mannington Township, Salem County, flows into Salem Creek	Salem.
Hominy; hills in Atlantic Township, Monmouth County	Sandy Hook.
Honey; branch of Stony Brook in Hopewell Township, Mercer County.	Lambertville. Princeton.
Honey Run; brook rising in Knowlton Township, Warren County, flows east into Beaver Brook in Hope Township, Warren County.	Delaware Water Gap. Hackettstown.
Hook; beacon at north end of Sandy Hook	Sandy Hook.
Hook; brook in Millville Township, Cumberland County, flows into Manumuskin Creek	Tuckahoe.
Hop; brook tributary to Swimming River, forms partial boundary between Middletown and Holmdel townships on the north and Atlantic Township, Monmouth County, on the south	Sandy Hook.
Hopatcong; lake in Morris County, touching southeast border of Sussex County. It forms boundary between Roxbury and Jefferson townships, Morris County, and Byram Township, Sussex County	Lake Hopatcong.
Hope; township in Warren County; area 31 square miles.	Delaware Water Gap. Hackettstown.
Hope; village in Hope Township, Warren County, on Beaver Brook	Hackettstown.
Hopeville; village in Wall Township, Monmouth County	Asbury Park.
Hopewell; township in Mercer County; area, 60 square miles.	Lambertville. Princeton.
Hopewell; township in Cumberland County; area, 34 square miles.	Bridgeton. Bayside. Salem.
Hopewell; village in Sparta Township, Sussex County	Franklin.
Hopewell; village in Hopewell Township, Mercer County, on New York Division, Philadelphia and Reading R. R.	Lambertville.
Hopping; village in Middletown Township, Monmouth County, on Atlantic Highlands Branch of New Jersey Southern R. R	Sandy Hook.
Horicon; village in Manchester Township, Ocean County	Whitings.
Hornerstown; village in Upper Freehold Township, Monmouth County, on Pemberton and Hightstown R. R.	Bordentown.
Horse; point projecting from Little Egg Harbor into Eaglewood Township, Ocean County	Little Egg Harbor.
Horse Neck Bridge; village in Montville Township, Morris County, on Passaic River	Morristown.
Horse Run; brook forming partial boundary between Stow Creek Township, Cumberland County, and Quinton and Lower Alloways Creek Townships, Salem County, flows into Stow Creek	Bayside.
Horton; village in Chester Township, Morris County, on Chester Branch of Delaware, Lackawanna and Western R. R	Lake Hopatcong.

	Names of sheets.
Hospitality; brook in Randolph Township, Burlington County, flows into Little Hauken	Mullica.
Hospitality Branch; brook rising in Monroe Township, Gloucester County, flows through Monroe Township and across Buena Vista Township, Atlantic County, into Great Egg Harbor River.	Hammonton. Glassboro.
Houtenville; village in Woodbridge Township, Middlesex County, on South Branch of Rahway River and on Pennsylvania R. R	Plainfield.
Howardsville; village in Lacey Township, Ocean County..	Whitings.
Howell; township in Monmouth County; area, 66 square miles	Asbury Park. Cassville. Sandy Hook.
Howell; village in Howell Township, Monmouth County.	Cassville.
Howell; creek in Lawrence Township, Cumberland County, flows into Cedar Creek	Bridgeton.
Howell; station in Howell Township, Monmouth County, on Freehold and Jamesburg R. R., Pennsylvania R. R	Asbury Park.
Howell; pond in Andover Township, Sussex County	Franklin.
Hubbard; creek in Upper Township, Cape May County, flows into Peck Bay	Great Egg Harbor.
Huckleberry Hill; village in Southampton Township, Burlington County	Pemberton.
Hudson; county in northeast part of the State; area, 60 square miles.	Paterson. Harlem. Staten Island.
Hudson; river rising in the Adirondack Mountains of New York, flows south into New York Bay.	Tarrytown. Harlem. Paterson. Staten Island.
Hughes; creek in Upper Township, Cape May County, flows into Tuckahoe River	Great Egg Harbor.
Hughesville; village in Pohatcong Township, Warren County, on Musconetcong River and on Lehigh Valley R. R.	Easton.
Hunt; pond in Green Township, Sussex County	Wallpack.
Hunterdon; county in northwest part of the State; area, 439 square miles.	Easton. Doylestown. Lambertville. High Bridge. Hackettstown. Somerville.
Hunters Mill; village in Weymouth Township, Atlantic County, on Tuckahoe River	Tuckahoe.
Huntsville; village in Green Township, Sussex County, on Lehigh and Hudson River R. R	Hackettstown.
Hurdtown; village in Jefferson Township, Morris County, on Weldon Brook and on the Central R. R. of New Jersey..	Lake Hopatcong.
Hurffville; village in Washington Township, Gloucester County	Philadelphia.
Husted; village in Deerfield Township, Cumberland County, on West Jersey R. R	Glassboro.
Hutchinson; village in Harmony Township, Warren County, at junction of Buckhorn Creek with Delaware River and on Belvidere Division, Pennsylvania R. R	Delaware Water G

	Names of sheets.
Iliff; pond in Andover Township, Sussex County	Franklin.
Imlaystown; village in Upper Freehold Township, Monmouth County, on Doctor Creek	Bordentown.
Independence; township in Warren County; area 20 square miles	Hackettstown.
Independence Corner; village in Vernon Township, Sussex County	Franklin.
India; brook in Randolph and Mendham townships, Morris County, tributary to North Branch of Raritan River	Lake Hopatcong.
Indian; creek in Commercial Township, Cumberland County, tributary to Dividing Creek	Maurice Cove.
Indian Branch; brook in Hamilton and Buena Vista townships, Atlantic County, flows into Great Egg Harbor River	Hammonton.
Indian Jack; brook in Woodland Township, Burlington County	Whitings.
Indian Mills; village in Shamong Township, Burlington County, on Muskingum Brook	Pemberton.
Ingersoll Branch; brook in Maurice River Township, Cumberland County, flows west into Manumuskin River	Tuckahoe.
Indian Cabin; creek rising in Mullica Township; flows northeast through portion of Egg Harbor City, Atlantic County, into Mullica River	Mullica.
Ingram Thorofare; passage in coast swamp in Middle Township, Cape May County	Sea Isle.
Interlaken; village in Ocean Township, Monmouth County.	Asbury Park.
Iona; village in Franklin Township, Gloucester County, on West Jersey R. R	Glassboro.
Iresick; brook in Madison Township, Middlesex County; flows into South River	New Brunswick.
Ironia; village in Randolph Township, Morris County, on Chester Branch of Delaware, Lackawanna and Western R. R	Lake Hopatcong.
Irvington; borough in Clinton Township, Essex County	Staten Island.
Iselin; village in Woodbridge Township, Middlesex County, on Pennsylvania R. R	Plainfield.
Island; beach on coast of Galloway Township, Atlantic County	Atlantic City.
Island Beach; village on coast of Galloway Township, Atlantic County	Atlantic City.
Island Beach; island in Sandy Hook Bay, in Middletown Township, Monmouth County	Sandy Hook.
Island Beach; life-saving station on Island Beach in Berkeley Township, Ocean County	Barnegat.
Island Heights; village in Dover Township, Ocean County, on Toms River	Barnegat.
Island View; village in Woodbridge Township, Middlesex County, on Arthur Kill and on New York and Long Branch R. R	Staten Island.
Isveland Thorofare; passage in coast swamp in Bass River Township, Burlington County	Little Egg Harbor.
Ivanhoe; brook in Millstone and Upper Freehold townships, Monmouth County; flows into Lahaway Creek	Cassville.
Ives Branch; brook *in Bass River* township, Burlington *County; flows into Wading River*	Little Egg Harbor.

	Names of sheets.
Jack Run; brook in Pemberton and New Hanover townships, Burlington County; flows into North Branch of Rancocas Creek.	Bordentown. Pemberton.
Jackson; township in Ocean County; area 98 square miles..	Cassville.
Jackson; village in Waterford Township, Camden County..	Mount Holly.
Jackson; brook in Randolph Township, Morris County, tributary to Rockaway River..........................	Lake Hopatcong
Jackson Mills; village in Jackson Township, Ocean County.	Cassville.
Jacksonburg; village in Blairstown Township, Warren County, on Jacksonburg Creek..........................	Hackettstown.
Jacksonburg; creek rising in Stillwater Township, Sussex County; flows southwest into Warren County, passing through Hardwick Township into Paulins Kill, in east central part of Blairstown Township.	Wallpack. Hackettstown.
Jacksonville; village in Springfield Township, Burlington County..	Burlington.
Jacksonville; village in Madison Township, Middlesex County	New Brunswick.
Jacob; creek in Hopewell Township, Mercer County, tributary to Delaware River..................................	Lambertville.
Jacob; creek in Greenwich Township, Cumberland County, flows into Delaware River............................	Bayside.
Jacobstown; village in New Hanover Township, Burlington County..	Bordentown.
Jake Branch; brook in Berkeley Township, Ocean County, flows into Toms River.	Whitings. Barnegat.
James Branch; brook in Weymouth Township, Atlantic County; flows into Stephen Creek........................	Tuckahoe.
Jamesburg; borough in Monroe township, Middlesex County, at junction of two branches of the Pennsylvania R. R., the Freehold and Jamesburg R. R. and the Camden and Amboy R. R..	New Brunswick.
Janvier; village in Franklin Township, Gloucester County..	Glassboro.
Jarvis; sound in Lower Township, Cape May County........	Cape May.
Jeffer; creek in Egg Harbor Township, Atlantic County.....	Great Egg Harbor.
Jefferson; township in Morris County, area 44 square miles.	Franklin. Greenwood Lake. Hopatcong.
Jefferson; village in Harrison Township, Gloucester County.	Philadelphia.
Jeffries; landing in Egg Harbor Township, Atlantic County, on Great Egg Harbor River............................	Great Egg Harbor.
Jenkins; channel in Middle Township, Cape May County, connecting Dead Thorofare with Jenkins Sound.........	Dennisville.
Jenkins; sound in Middle township, Cape May County......	Dennisville.
Jenkins Neck; high land in Randolph Township, Burlington County..	Mullica.
Jennings; creek in West Milford Township, Passaic County, tributary to Wanaque River............................	Greenwood Lake.
Jennings Mill; village in Evesham Township, Burlington County..	Mount Holly.
Jenny; creek in coast swamp in Little Egg Harbor Township, Burlington County.................................	Little Egg Harbor.
Jenny Jump; mountain in Oxford Township, Warren County; altitude, 1,074 feet.	Delaware Water Gap. Hackettstown.
Jericho; village in Stow Creek Township, Cumberland County, on Horse Run................................	Bayside.

	Names of sheets.
Jersey City; in Hudson County, on Hudson River, opposite New York; area, 19 square miles.	Staten Island. Paterson.
Jerseyville; village in Howell Township, Monmouth County.	Asbury Park.
Jessie; creek in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Jessie; point projecting from Little Egg Harbor Township, Burlington County, into Little Egg Harbor	Little Egg Harbor.
Job; creek in Bass River Township, Burlington County; flows into Bass River	Little Egg Harbor.
Job; creek in Upper Township, Cape May County; flows into Tuckahoe River	Great Egg Harbor.
Job; point projecting from Egg Harbor Township, Atlantic County, into Great Egg Harbor	Great Egg Harbor.
Jobstown; village in Springfield Township, Burlington County, on Kinkora Branch, Amboy Division, Pennsylvania R. R	Bordentown.
Jobstown Bog; marsh in Medford Township, Burlington County	Mount Holly.
Johney Sledge; island in Little Egg Harbor, in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Johnson Place; village in Woodland Township, Burlington County	Pemberton.
Johnsonburg; village in Frelinghuysen Township, Warren County	Hackettstown.
Johnsontown; village in Galloway Township, Atlantic County	Little Egg Harbor.
Jonadab; creek in Dennis Township, Cape May County, flowing into Kill Thorofare	Sea Isle.
Jonas; island in coast swamp in Egg Harbor Township, Atlantic County	Great Egg Harbor.
Jones; island in coast swamp in Lawrence Township, Cumberland County	Bridgeton.
Jones Mill; village in Woodland Township, Burlington County	Pemberton.
Jordantown; village in Stockton Township, Camden County.	Philadelphia.
Juliustown; village in Springfield Township, Burlington County, on Kinkora Branch, Amboy Division, Pennsylvania R. R	Bordentown.
Junction; village in Bethlehem township, Hunterdon County, on Musconetcong River and at junction of New Jersey Central with Delaware, Lackawanna and Western R. R	High Bridge.
Kaighn; point of land projecting from Camden City into Delaware River	Philadelphia.
Kalarama; village in Blairstown Township, Warren County, on Paulins Kill and on New York, Susquehanna and Western R. R	Hackettstown.
Kanouse; mountain range in West Milford Township, Passaic County	Greenwood Lake.
Karrville; village in Mansfield Township, Warren County, on Pahatcong Creek	Hackettstown.
Keansburg; village in Raritan Township, Monmouth County, on Waycake Creek	Sandy Hook.
Kearney; township in Hudson County; area, 10 square miles.	Paterson. Staten Island.

	Names of sheets.
Kearney; village in Kearney Township, Hudson County, on Passaic River and on Orange Branch of New York and Greenwood Lake R. R	Paterson.
Keasbey; creek in Mannington Township, Salem County, flows into Fenwick Creek	Salem.
Kelly; point projecting from Lower Penns Neck Township, Salem County, into Delaware River	Wilmington.
Kennedy; village in Pohatcong Township, Warren County, on Pohatcong Creek, on New Jersey Central R. R. and on Lehigh Valley R. R	Easton.
Kenvil; village in Roxbury Township, Morris County, on Morris Canal and on High Bridge Branch of Central R. R. of New Jersey	Lake Hopatcong.
Ker Corners; village in Frelinghuysen Township, Warren County	Hackettstown.
Kettle; creek rising in Brick Township, forming partial boundary between Brick and Dover townships, Ocean County, flows into Barnegat Bay	Asbury Park.
Kettle Run; brook in Evesham and Medford townships, Burlington County, tributary to Haynes Creek	Mount Holly.
Kettle Run; brook in Upper Pittsgrove Township, Salem County, flows into Oldman Creek	Glassboro.
Key Branch; brook in Winslow Township, Camden County, flows into Great Egg Harbor River	Hammonton.
Key East; village in Neptune Township, Monmouth County, on New York and Long Branch R. R	Asbury Park.
Keyport; town in Raritan Township, Monmouth County, on Freehold and New York R. R. and on Raritan Bay	Sandy Hook.
Kinderkamac; village in Washington Township, Bergen County, on New Jersey and New York R. R	Paterson.
King; pond in coast swamp in Downe Township, Cumberland County	Maurice Cove.
King; creek in Linden Township, Union County, tributary to Rahway River	Plainfield.
Kingtown; village in Franklin Township, Hunterdon County, on Cakepoulin Creek	High Bridge.
Kingwood; township in Hunterdon County; area, 37 square miles.	Easton. Doylestown. Lambertville. High Bridge.
Kingwood; village in Kingwood Township, Hunterdon County, on Lockatong Creek	Doylestown.
Kingwood Station; village in Kingwood Township, Hunterdon County, on Delaware River and on Belvidere Division of Pennsylvania R. R	Doylestown.
Kingsland; village in Union Township, Bergen County, on Boonton Branch of Delaware, Lackawanna and Western R. R	Paterson.
Kingsland; creek in Union Township, Bergen County, tributary to Hackensack River	Paterson.
Kingston; village in Franklin Township, Somerset County, and South Brunswick Township, Middlesex County, on Millstone River, on Delaware and Raritan Canal, and on Pennsylvania R. R	Princeton.

	Names of sheets.
Kinkora; village in Mansfield Township, Burlington County, on Kinkora Branch, Amboy Division, Pennsylvania R. R.	Burlington.
Kirkwood; village in Gloucester Township, Camden County, on Camden and Atlantic R. R.	Philadelphia.
Kitt Thorofare; passage in coast swamp in Dennis Township, Cape May County	Sea Isle.
Kittatinny; mountain, portion of Appalachian system, extending from Orange County, N. Y., southwest through Sussex and Warren counties, N. J., into Pennsylvania	Bushkill Falls. Delaware Water Gap. Wallpack. Franklin. Port Jervis.
Klinesville; village in Raritan Township, Hunterdon County.	High Bridge.
Knowlton; township in Warren County; area, 26 square miles.	Delaware Water Gap.
Knowlton; village in Knowlton Township, Warren County.	Delaware Water Gap.
Lacey; township in Ocean County; area, 108 square miles	Whitings. Barnegat.
Lacey; village in Lacey Township, Ocean County, on Tuckerton R. R.	Whitings.
Lafayette; township in Sussex County; area, 18 square miles.	Franklin.
Lafayette; village in Lafayette Township, Sussex County, on Sussex R. R. and on Paulins Kill River	Franklin.
Lafayette Mills; village in Marlboro Township, Monmouth County, on Milford Brook	New Brunswick.
Lahaway; creek in Jackson Township, Ocean County and Upper Freehold Township, Monmouth County, tributary to Crosswick Creek.	Bordentown. Cassville.
Lahaway Plantations; village in Jackson Township, Ocean County	Cassville.
Lake; bay in coast swamp of Egg Harbor Township, Atlantic County	Great Egg Harbor.
Lake; creek in Egg Harbor Township, Atlantic County, flows into Great Egg Harbor River	Great Egg Harbor.
Lake Como: village in Wall Township, Monmouth County, on Lake Como	Asbury Park.
Lake Denmark; village in Rockaway Township, Sussex County	Lake Hopatcong.
Lakedate; village in Winslow Township, Camden County, on Philadelphia and Reading R. R	Hammonton.
Lakeside; village in West Milford Township, Passaic County, on western shore of Greenwood Lake	Greenwood Lake.
Lakewood; town in Brick Township, Ocean County, on Lake Carasaljo	Asbury Park.
Lambertville; city in Hunterdon County, west of West Amwell Township, on Delaware River and at junction of Flemington Branch with Belvidere Division Pennsylvania R. R	Lambertville.
Lamington; village in Bedminster Township, Somerset County, on Lamington River	Somerville.
Lamington; river rising in Morris County, forms boundary between Hunterdon and Somerset counties. and is tributary to North Branch of Raritan River. Its headwaters above boundary of Morris County, are called Black River	Lake Hopatcong. Somerville.

	Names of sheets.
Landis; township in Cumberland County; area, 70 square miles.	Hammonton. Bridgeton. Tuckahoe. Glassboro.
Landisville; village in Buena Vista Township, Atlantic County, on New Jersey Southern R. R	Hammonton.
Lanes; pond in Sparta Township, Sussex County	Franklin.
Lansdowne; village in Franklin Township, Hunterdon County, at junction of Cakepoulin Creek with south Branch of Raritan River, also at junction of Clinton Branch of Lehigh Valley with Lehigh Valley R. R	High Bridge.
Larison Corner; village in southern part of Raritan Township, Hunterdon County, on Flemington Branch, Belvidere Division, Pennsylvania R. R	Lambertville.
Laurel; village in Gloucester Township, Camden County, on Philadelphia and Reading R. R	Philadelphia.
Laurel; pond in Vernon Township, Sussex County	Greenwood Lake.
Laurel Mills; village in Gloucester Township, Camden County, on North Branch of Timber Creek	Philadelphia.
Lavallette; borough on reef in Dover Township, Ocean County, on Philadelphia and Long Branch R. R	Barnegat.
Lawnton Station; village in Center Township, Camden County, on Philadelphia and Reading R. R	Philadelphia.
Lawren Branch; brook in Maurice River Township, Cumberland County, flowing west into Manumuskin River	Tuckahoe.
Lawrence; township in Cumberland County; area, 36 square miles.	Bayside. Bridgeton.
Lawrence; township in Mercer County; area, 22 square miles.	Princeton. Bordentown. Burlington. Lambertville.
Lawrence; brook rising in South Brunswick Township, Middlesex County, flows northeast, forming boundary between North Brunswick Township and East Brunswick Township, into Raritan River.	Princeton. New Brunswick.
Lawrence Branch; brook in Maurice River Township, Cumberland County, flows into Tuckahoe River	Tuckahoe.
Lawrence Station; village in Lawrence Township, Mercer County, on Pennsylvania R. R	Princeton.
Lawrenceville; village in Lawrence Township, Mercer County	Princeton.
Layton; village in Sandyston Township, Sussex County, on Little Flat Brook	Wallpack.
Layton; mines situated in eastern part of Vernon Township, Sussex County, on New York boundary	Greenwood Lake.
Leaming Mills; village in Landis Township, Cumberland County	Tuckahoe.
Lebanon; township in Hunterdon County; area, 26 square miles.	Hackettstown. High Bridge.
Lebanon; village in Clinton Township, Hunterdon County, on Central R. R. of New Jersey	High Bridge.
Lebanon Glass Works; village in Woodland Township, Burlington County	Pemberton.
Ledgewood; village in Roxbury Township, Sussex County	Lake Hopatcong.

	Names of sheets.
Lee; meadows in Hanover Township, Morris County	Morristown.
Leeds; point projecting into coast swamp in Galloway Township, Atlantic County	Atlantic City.
Leedsville; village in Middletown Township, Monmouth County	Sandy Hook.
Leesburg; town in Maurice River Township, Cumberland County, on West Jersey R. R	Tuckahoe.
Leonards; village in West Deptford Township, Gloucester County, on Delaware River R. R	Philadelphia.
Leonia; village in Ridgefield Township, Bergen County, on Northern R. R. of New Jersey	Harlem.
Lewistown; village in New Hanover Township, Burlington County, at junction of Pemberton and Hightstown R. R. and Kinkora Branch, Amboy Division, Pennsylvania R. R.	Bordentown.
Liberty; island off Jersey City, in New York Upper Bay	Staten Island.
Liberty Corner; village in Bernard Township, Somerset County, on Harrisons Brook	Somerville.
Liberty Park Station; village in Haddon Township, Camden County, on Camden and Atlantic R. R	Philadelphia.
Libertyville; village in Wantage Township, Sussex County	Franklin.
Lincoln; village in South Harrison Township, Gloucester County	Glassboro.
Lincoln Park; village in Pequannock Township, Morris County, on Morris Canal and on Boonton Branch of Delaware, Lackawanna and Western R. R	Morristown.
Linden; borough in Union County, on Pennsylvania R. R	Plainfield.
Linden; township in Union County; area 14 square miles	Plainfield. Staten Island.
Linwood; borough in Egg Harbor Township, Atlantic County, on West Jersey R. R	Great Egg Harbor.
Linwood; village in Ridgefield township, Bergen County, on Hudson River	Harlem.
Little; creek on boundary between Southampton and Medford townships, Burlington County, flows into Haynes Creek.	Mount Holly.
Little; sound in Middle Township, Cape May County	Dennisville.
Little; island in Little Egg Harbor, in Eagleswood Township, Ocean County	Little Egg Harbor.
Little; bay in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Little; pond in eastern part of Sparta Township, Sussex County	Franklin.
Little; pond in Hampton Township, Sussex County	Wallpack.
Little; cove, an arm of Lake Hopatcong indenting the northern coast of Roxbury Township, Morris County	Lake Hopatcong.
Little Beach; life-saving station on Island Beach	Atlantic City.
Little Ease Run; brook in Monroe, Glassboro, Clayton, and Franklin townships, Gloucester County, flows into Maurice River	Glassboro.
Light Egg; life-saving station at south end Tucker Beach	Atlantic City.
Little Egg; harbor on coast of New Jersey, between New Inlet and Barnegat Bay	Little Egg Harbor.
Little Egg Harbor; township in Burlington County; area, 75 square miles.	Atlantic City. Whitings. Little Egg Harbor.

	Names of sheets.
Little Egg Harbor; light-house on Tucker Island, in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Little Falls; township in Passaic County; area, 6 square miles	Paterson.
Little Falls; village in Little Falls Township, Passaic County, on Morris Canal, on Passaic River, and on New York and Greenwood Lake R. R.	Paterson.
Little Ferry; town in Lodi Township, Bergen County, on Hackensack River	Paterson.
Little Flat; brook in Sandyston Township, Sussex County, western tributary to Flat Brook	Wallpack.
Little Hauken; brook in Randolph Township, Burlington County, flows into West Branch of Wading River.	Pemberton. Mullica.
Little Lebanon; creek in Washington Township, Gloucester County, tributary to South Branch of Timber Creek.	Philadelphia. Glassboro.
Little Meadow Run; brook in Egg Harbor Township, Atlantic County, tributary to Patcong Creek	Great Egg Harbor.
Little Mud Thorofare; passage in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Little Pond; creek in Downe Township, Cumberland County, flows into Nantuxent Creek	Bridgeton.
Little Sandy; island in Barnegat Bay, in Union Township, Ocean County	Long Beach.
Little Scotch Bonnet; stream in Middle Township, Cape May County, connecting Mulford Creek with Nicholas Channel	Dennisville.
Little Sheepshead; creek in coast swamp, in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Little Silver; lake in Brick Township, Ocean County	Asbury Park.
Little Silver; creek in Shrewsbury Township, Monmouth County, flows into Shrewsbury River	Sandy Hook.
Little Silver; village in Shrewsbury Township, Monmouth County	Sandy Hook.
Little Snake; hill in North Bergen Township, Hudson County; altitude, 23 feet	Paterson.
Little Thorofare; passage in coast swamp in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Little Timber; creek in Logan Township, Gloucester County, flows into Delaware River	Chester.
Little Timber; creek in Center Township, Camden County, tributary to Big Timber Creek	Philadelphia.
Little York; village in Alexandria Township, Hunterdon County	Easton.
Little York; village in Oxford Township, Warren County	Delaware Water Gap.
Littleton; village in Hanover Township, Morris County	Morristown.
Littletown; village in Franklin Township, Hunterdon County	High Bridge.
Livingston; township in Essex County; area, 17 square miles.	Morristown.
Livingston; village in Livingston Township, Essex County.	Morristown.
Llewellyn Park; village in West Orange Township, Essex County	Paterson.
Lockatong; creek rising in Franklin Township, flows through Kingwood Township into Delaware River in Delaware Township, Hunterdon County.	Doylestown. Easton. High Bridge.

	Names of sheets.
Lockport; village in Raritan Township, Monmouth County, on Chinagarora Creek	Sandy Hook.
Locktown; village in Delaware Township, Hunterdon County	Lambertville.
Locust; hill in Manalapan Township, Monmouth County; elevation, 263 feet	New Brunswick.
Locust Corner; village in East Windsor Township, Mercer County	Princeton.
Locust Grove; village in Delaware Township, Camden County	Mount Holly.
Locust Grove; village in Westfield Township, Union County.	Plainfield.
Lodi; Township in Bergen County; area, 15 square miles	Paterson.
Lodi; village in Delaware Township, Camden County	Mount Holly.
Lodi; town in Lodi Township, Bergen County, on Saddle River and on Lodi branch of New Jersey and New York R. R	Paterson.
Log Swamp Branch; brook rising in Little Egg Harbor Township, Burlington County, flows northeast into Westecunk Creek in Eagleswood Township, Ocean County	Little Egg Harbor.
Logan; township in Gloucester County, area 28 square miles.	Salem.
London Branch; brook tributary to Repaupo Creek in Greenwich Township, Gloucester County	Chester.
Long; meadow in Caldwell Township, Essex County	Morristown.
Long; point projecting from Dover Township, Ocean County, into Toms River	Barnegat.
Long; point projecting from Eagleswood Township, Ocean County, into Little Egg Harbor	Little Egg Harbor.
Long; pond in Andover Township, Sussex County	Franklin.
Long; pond in Frankford Township, Sussex County	Wallpack.
Long; pond in Wallpack Township, Sussex County	Wallpack.
Long Beach; life-saving station on coast of Eagleswood Township, Ocean County	Long Beach.
Long Branch; life-saving station on coast of Ocean Township, Monmouth County	Sandy Hook.
Long Branch; town in Ocean Township, Monmouth County, on the Atlantic Ocean, on New Jersey Southern R. R. and on New York and Long Branch R. R	Sandy Hook.
Long Branch; brook in Ocean and Lacey townships, Ocean County, tributary to North Branch of Forked River	Whitings.
Long Branch; brook in Jackson Township, Ocean County, flows into Toms River	Cassville.
Long Branch; brook in Eatontown and Ocean townships, Monmouth County, tributary to Pleasure Bay	Sandy Hook.
Long Branch Run; brook in Stow Creek Township, Cumberland County, flows into Horse Run	Bayside.
Long Cape Island; creek in Lower Township, Cape May County	Cape May.
Long Causeway; village in Woodland Township, Burlington County	Whitings.
Long Causeway Branch; brook in Brick Township, Ocean County	Asbury Park.
Long Cripple; brook in Woodland Township, Burlington County, tributary to Shoal Branch	Whitings.
Long Hill; village in Passaic Township, Morris County	Plainfield.

	Names of sheets.
ng Hill; mountain range extending along southern boundary of Morris County. Its greatest elevation is 489 feet.	Plainfield. Somerville.
ong Reach; village in Commercial Township, Cumberland County, on Maurice River	Maurice Cove.
ong Reach; passage in coast swamp in Middle Township, Cape May County.	Dennisville. Sea Isle.
ong Spring; brook in Woodland Township, Burlington County; flows into Governors Mill Brook.	Whitings. Pemberton.
Longport; village on coast of Egg Harbor Township, Atlantic County	Great Egg Harbo
Loper Run; brook in Deerfield Township, Cumberland County; flows into Cohansey Creek.	Bridgeton. Bayside.
Lopatcong; township in Warren County; area, 9 square miles	Easton.
Lopatcong; creek rising in Harmony Township, flows southwest into Delaware River in Lopatcong Township, Warren County	Easton.
Lopatcong; village in Lopatcong Township, Warren County, on Lopatcong Creek, on Morris Canal, on New Jersey Central R. R. and on Lehigh Valley R. R	Easton.
Lorillard; village in Raritan Township, Monmouth County..	Sandy Hook.
Losee; pond in Hardiston Township, Sussex County	Franklin.
Lovelady; island in Barnegat Bay in Union Township, Ocean County	Long Beach.
Lovelady Islands; life-saving station on coast of Union Township, Ocean County	Long Beach.
Low Moor; village on reef in Shrewsbury Township, Monmouth County, on New York and Long Branch R. R	Sandy Hook.
Low Water Thorofare; passage in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Lower; township in Cape May County; area, 36 square miles	Dennisville. Cape May.
Lower; valley in Lebanon Township, Hunterdon County...	High Bridge.
Lower Alloways Creek; township in Salem County; area, 46 square miles.	Bayside. Salem.
Lower Bank; village in Randolph Township, Burlington County, on Mullica River	Mullica.
Lower Chatham Bridge; village in Millburn Township, Essex County, on Passaic River	Morristown.
Lower Harmony; village in Harmony Township, Warren County, on Lopatcong Creek	Easton.
Lower Longwood; pond in Jefferson Township, Morris County	Lake Hopa
Lower Mill; village in Pemberton Township, Burlington County	Pemberton
Lower Penns Neck; township in Salem County; area, 24 square miles	Salem.
Lows Hollow; village in Lopatcong Township, Warren County	Easton.
Lubbers Run; river rising in Sparta Township, Sussex County, flows southwest into Musconetcong River, in Byram Township, Sussex County.	Franklin Lake Ho
Lucas Branch; brook in Mullica Township, Atlantic County, flows in Mullica River	Mullica.

	Names of sheets.
dlam; beach along coast of Upper and Dennis townships, Cape May County	Sea Isle.
dlam; bay on boundary between Dennis and Upper townships, Cape May County	Sea Isle.
dlam; creek in Upper Township, Cape May County, tributary to Hughes Creek	Great Egg Harbor.
dlam Beach; light on Ludlam Beach	Sea Isle.
dlam Thorofare; passage in coast swamp in Dennis Township, Cape May County	Sea Isle.
mberton; township in Burlington County; area, 21 square miles	Mount Holly.
mberton; village in Lumberton Township, Burlington County, on Philadelphia, Marlton and Medford R. R.	Mount Holly.
mmistown; village in Lawrence Township, Cumberland County, on Cedar Creek	Bridgeton
patcong; creek in Matawan and Raritan townships, Monmouth County, flows into Raritan Bay	Sandy Hook.
ons; village in Bernard Township, Somerset County, on Passaic and Delaware Branch of Delaware, Lackawanna and Western R. R	Somerville.
ons Farms; village in Union Township, Union County	Staten Island.
onsville; village in Rockaway Township, Morris County	Morristown.
ndhurst; village in Union Township, Bergen County, on Passaic River and on Boonton Branch of Delaware, Lackawanna and Western R. R	Paterson.
cannippuck; creek in Stow Creek Township, Cumberland County, tributary to Newport Creek	Bayside.
copin; lake in West Milford Township, Passaic County	Greenwood Lake.
copin; village in West Milford Township, Passaic County	Greenwood Lake.
d Horse; creek in Lower Alloways Creek Township, Salem County, flows into Delaware River	Bayside.
dison; township in Middlesex County; area, 37 square miles.	New Brunswick. Sandy Hook.
dison; borough in Chatham Township, Morris County, on Delaware, Lackawanna and Western R. R	Morristown.
gnolia; village in Oldman Township, Salem County, on Delaware River R. R	Chester.
gnolia; village in Pemberton Township, Burlington County	Pemberton.
gnolia Station; village in Center Township, Camden County, on Philadelphia and Reading R. R	Philadelphia.
ahoras; brook in Middletown and Holmdel townships, Monmouth County, tributary to Waycake Creek	Sandy Hook.
ahwah; village in Hohokus Township, Bergen County, on New York, Lake Erie and Western R. R	Ramapo.
ain; point projecting from Stafford Township, Ocean County, into Manahawken Bay	Long Beach.
ain; channel in coast swamp in Galloway Township, Atlantic County, opens into Absecon Inlet	Atlantic City.
ain; channel in coast swamp connecting Ludlam Bay with Corson Inlet, in Upper Township, Cape May County	Sea Isle.
ain; channel in Dennis and Middle townships, Cape May County, connecting Townsend Sound with Townsend Inlet	Sea Isle.

	Names of sheets.
Main Marsh Thorofare; passage in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Maine Avenue; station on New Jersey Southern R. R., in Landis Township, Cumberland County	Hammonton.
Major Run; brook on boundary between Pilesgrove and Mannington townships, Salem County, flows into Salem Creek	Salem.
Malaga; village in Franklin Township, Gloucester County	Glassboro.
Malapardis; village in Hanover Township, Morris County	Morristown.
Manahawken; bay in Stafford and Union townships, Ocean County	Long Beach.
Manahawken; creek in Stafford Township, Ocean County, flows into Manahawken Bay	Long Beach.
Manahawken; village in Stafford Township, Ocean County, on Tuckerton R. R.	Little Egg Harbor.
Manalapan; township in Monmouth County; area, 31 square miles.	Cassville. New Brunswick.
Manalapan; brook tributary to South River, in Manalapan Township, Monmouth County, and Monroe Township, Middlesex County	New Brunswick.
Manalapan; village in Manalapan Township, Monmouth County	New Brunswick.
Manantico; village in Millville Township, Cumberland County	Bridgeton.
Manantico; creek in Buena Vista Township, Atlantic County, Landis and Millville townships, Cumberland County, flows into Maurice River. It forms a partial boundary between Millville and Commercial townships, Cumberland County.	Tuckahoe. Bridgeton.
Manapaqua Branch; brook in Manchester Township, Ocean County, flows into Union Branch of Toms River	Cassville.
Manasquan; river rising in Freehold township, flows southeast through Howell and Wall townships, and forming partial boundary between Wall and Brick townships, Monmouth County, empties into Manasquan Inlet.	Cassville. Asbury Park.
Manasquan; inlet, at mouth of Manasquan River, extending from Atlantic Ocean between Brick Township, Ocean County, and Wall Township, Monmouth County	Asbury Park.
Manasquan; town in Wall Township, Monmouth County, on Philadelphia and Long Branch R. R	Asbury Park.
Manchester; township in Passaic County; area, 11 square miles	Paterson.
Manchester; township in Ocean County; area, 83 square miles.	Whitings. Cassville.
Manchester; town in Manchester Township, Ocean County, at junction of New Jersey Southern and Philadelphia and Long Branch railroads	Cassville.
Mannington; township in Salem County; area, 38 square miles	Salem.
Mannington; creek in Mannington Township, Salem County, tributary to Salem Creek	Salem.
Mansfield; *township in Warren County; area, 30 square miles*	Hackettstown.
Mansfield; *township in Burlington County; area, 23 square miles.*	Bordentown. Burlington.

	Names of sheets.
Mansfield; village in Mansfield Township, Burlington County	Bordentown.
Mansfield Square; village in Bordentown Township, Burlington County	Bordentown.
Mantoloking; life-saving station on reef in Brick Township, Ocean County	Asbury Park.
Mantoloking; village on reef in Brick Township, Ocean County, on Philadelphia and Long Branch R. R.	Asbury Park.
Mantua; creek rising in Glassboro Township, flows northwest through Gloucester County into Delaware River at Greenwich Township.	Philadelphia. Glassboro.
Mantua; township in Gloucester County; area, 19 square miles	Philadelphia. Glassboro.
Mantua; village in Mantua Township, Gloucester County, on Mantua Creek	Philadelphia.
Manumuskin; river heading in Buena Vista Township, Atlantic County, flows southwest, forming boundary between Maurice River Township, on the east, and Landis, Millville, and Commercial townships on the west, into Maurice River	Tuckahoe.
Manumuskin; village in Maurice River Township, Cumberland County, on Manumuskin River	Tuckahoe.
Manunkachunk; village in Oxford Township, Warren County, on Delaware River, on Delaware, Lackawanna and Western R. R., and at its junction with the Belvidere Division of Pennsylvania R. R.	Delaware Water Gap.
Maple Grange; village in Vernon Township, Sussex County, on Lehigh and Hudson River R. R.	Greenwood Lake.
Maple Island; creek in Newark City, Essex County, tributary to Newark Bay	Staten Island.
Maple Root Branch; brook in Jackson Township, Ocean County, flows into Toms River	Cassville.
Maple Run; brook in Egg Harbor Township, Atlantic County, flows into Patcong Creek	Great Egg Harbor.
Maple Shade Station; village in Chester Township, Burlington County, on Pennsylvania R. R., Amboy Division	Philadelphia.
Maplewood; village in South Orange Township, Essex County, on Delaware, Lackawanna and Western R. R., and on East Branch of Rahway River	Plainfield.
Marble; mountain in Lopatcong and Harmony townships, Warren County	Easton.
Marcia; lake in Montague Township, Sussex County	Port Jervis.
Mare Run; brook in Hamilton Township, Atlantic County, flows into Great Egg Harbor River.	Tuckahoe. Great Egg Harbor.
Marion; part of Jersey City, on Hackensack River	Staten Island.
Marksboro; village in Hardwick Township, Warren County, on Paulins Kill and on New York, Susquehanna and Western R. R	Hackettstown.
Marlboro; township in Monmouth County; area, 31 square miles.	Sandy Hook. New Brunswick.
Marlboro; village in Marlboro Township, Monmouth County, on Freehold and New York R. R	Sandy Hook.
Marlton; village in Evesham Township, Burlington County on *Philadelphia, Marlton and Medford* R. R	Mount Holly.

	Names of sheets.
Marquis; creek in Matawan Township, Monmouth County, flowing into Raritan Bay	Sandy Hook.
Marsh Elder; group of islands in Little Egg Harbor, Eaglewood Township, Ocean County	Long Beach.
Marsh Elder; channel in coast marsh, in Little Egg Harbor Township, Burlington County	Little Egg Harbo
Marsh Elder; island in Barnegat Bay, in Union Township, Ocean County	Long Beach.
Marshall; island off coast of Kingwood Township, Hunterdon County, in Delaware River	Doylestown.
Marshall Corner; village in Hopewell Township, Mercer County	Lambertville.
Marshalltown; village in Mannington Township, Salem County	Salem.
Marshalville; village in Upper Township, Cape May County, on branch of Tuckahoe River	Tuckahoe.
Martha; village in Bass River Township, Burlington County, on Oswego River or East Branch of Wading River	Mullica.
Martins Creek Station; village in Harmony Township, Warren County, on Delaware River and at junction of Belvidere Division and Martins Creek Branch Pennsylvania R. R.	Delaware Water
Martinsville; village in Bridgewater Township, Somerset County	Somerville.
Mary Ann Furnace; village in Pemberton Township, Burlington County	Pemberton.
Mashipacong; pond in Montague Township, Sussex County.	Port Jervis.
Mashipacong; island off Montague Township, Sussex County, in Delaware River.	Port Jervis. Milford.
Maskell Mill; village in Lower Alloways Creek Township, Salem County	Bayside.
Mason; creek on boundary between Lumberton and Mount Laurel townships, Burlington County, flows into South Branch of Rancocas Creek	Mount Holly.
Masonicus; village in Hohokus Township, Bergen County..	Ramapo.
Masonville; village in Mount Laurel Township, Burlington County, on Pennsylvania R. R	Mount Holly.
Mat Gut; brook in Middle Township, Cape May County, flowing into Dung Thorofare	Dennisville.
Matawan; township in Monmouth County; area, 8 square miles.	Sandy Hook. New Brunswick.
Matawan; borough in Matawan Township, Monmouth County, on Matawan Creek	Sandy Hook.
Matawan; creek in Matawan Township, Monmouth County, flowing into Raritan Bay	Sandy Hook.
Matchaponix; village in Monroe Township, Middlesex County, on Matchaponix River	New Brunswick.
Mathew; brook in West Deptford Township, Gloucester County, tributary to Woodbury Creek	Philadelphia.
Matthew; brook in Egg Harbor Township, Atlantic County, flows into Great Egg Harbor River	Great Egg Harbor.
Maurice; river in Gloucester County; flows into Maurice River Cove.	Glassboro. Bridgeton. Tuckahoe. Maurice Cove.

	Names of sheets.
Maurice River; township in Cumberland County; area, 105 square miles.	Bridgeton. Maurice Cove. Tuckahoe. Dennisville.
Maurice River; light-house on coast of Maurice River Township, Cumberland County	Maurice Cove.
Maurice River; cove projecting from Delaware Bay into Downe and Commercial Townships, Cumberland County.	Maurice Cove.
Maurice River Neck; peninsula extending into swamp in Maurice River Township, Cumberland County	Maurice Cove.
Mauricetown; station in Commercial township, Cumberland County, on Central R. R. of New Jersey	Bridgeton.
Mauricetown; village in Maurice River Township, Cumberland County, on Maurice River	Tuckahoe.
May Landing; town in Hamilton Township, Atlantic County, on Great Egg Harbor River	Great Egg Harbor.
Mayetta; village in Stafford Township, Ocean County, on Tuckerton R. R.	Little Egg Harbor.
Mayville; village in Middle Township, Cape May County	Dennisville.
Maywood; village in Midland Township, Bergen County	Paterson.
McAfee; village in Vernon Township, Sussex County, on Lehigh and Hudson River R. R.	Franklin.
McClellan; village, part of Orange City, Essex County, on Orange Branch of New York and Greenwood Lake R. R.	Paterson.
McDonald Branch; brook in Woodland Township, Burlington County, tributary to Mount Misery Brook	Pemberton.
McGellaird; brook in Freehold and Manalapan townships, Monmouth County, flowing into Wemrock Brook	New Brunswick.
McKeetown; village in Hamilton Township, Atlantic County	Great Egg Harbor.
Meadows; village in Kearney Township, Hudson County, at junction of Pennsylvania R. R. and Delaware, Lackawanna and Western R. R.	Staten Island.
Mechanicsville; village in Upper Freehold Township, Monmouth County	Cassville.
Mechanicsville; village in Gloucester Township, Camden County	Philadelphia.
Mechanicsville; village in Raritan Township, Monmouth County	Sandy Hook.
Mechesactauxin Branch; brook in Waterford Township, Camden County, and Hammonton and Mullica townships, Atlantic County, flowing into Mullica River.	Mount Holly. Mullica. Hammonton.
Medford; township in Burlington County; area, 42 square miles	Mount Holly.
Medford; town in Medford Township, Burlington County, on Haynes Creek and Philadelphia, Marlton and Medford R. R.	Mount Holly.
Melrose; village in Evesham Township, Burlington County.	Mount Holly.
Mendham; township in Morris County; area, 24 square miles	Lake Hopatcong. Somerville.
Mendham; village in Mendham Township, Morris County	Lake Hopatcong.
Menlo Park; village in Raritan Township, Middlesex County, on Pennsylvania R. R.	Plainfield.

	Names of sheets.
r; county in central part of the State; area, 228 square iles.	Lambertville. Burlington. Princeton. Bordentown. Cassville. New Brunswick.
erville; village in Hamilton Township, Mercer County.	Bordentown.
chantville; borough in Camden County, on Pennsylvania R. R., Amboy Division	Philadelphia.
riden; village in Rockaway Township, Morris County, on Beaver Brook	Morristown.
rrygold Branch; brook in Bass River Township, Burlington County, flowing into Wading River	Little Egg Harbor.
etedeconk; river rising in Freehold Township, Monmouth County, flows southeast across Monmouth and Ocean counties into Barnegat Bay.	Cassville. Asbury Park.
etedeconk Neck; point of land between Metedeconk River and Kettle Creek in Brick Township, Ocean County	Asbury Park.
Metuchen; town in Raritan Township, Middlesex County, where the Lehigh Valley and the Pennsylvania R. R. cross each other	Plainfield.
Michaels Run; brook in Manchester Township, Ocean County, tributary to Wrangel Brook	Whitings.
Mickleton; village in East Greenwich Township, Gloucester County, on West Jersey R. R	Philadelphia.
Middle; township in Cape May County; area, 93 square miles.	Dennisville. Sea Isle.
Middle; river in swamp in Weymouth Township, Atlantic County, flowing into Great Egg Harbor River.	Great Egg Harbor. Tuckahoe.
Middle; brook in Bedminster Township, Somerset County, tributary to North Branch of Raritan River	Somerville.
Middle; brook in Somerset County, tributary to Raritan River	Somerville.
Middle Branch; brook in Maurice River Township, Cumberland County, tributary to Muskee Creek	Tuckahoe.
Middle Channel; passage in coast swamp in Middle and Dennis townships, Cape May County	Sea Isle.
Middle Forge; village in Rockaway Township, Morris County, on Morris County R R	Lake Hopatcong.
Middle Marsh; creek in Fairfield Township, Cumberland County, flowing into Delaware River	Bayside.
Middle Run; brook in Lawrence Township, Cumberland County, flowing into Nantuxent Creek	Bridgeton.
Middle Thorofare; passage in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Middle Thorofare; passage in coast swamp in Upper Township, Cape May County	Sea Isle.
Middle Valley; village in Washington Township, Morris County, on South Branch of Raritan River and on New Jersey Central R. R	Hackettstown
Middlebush; village in Franklin Township, Somerset County, on Millstone Branch of Pennsylvania R. R	Princeton.
Middlebush; brook in Franklin Township, Somerset County, *tributary to Six* Mile Run	Princeton.

	Names of sheets.
Middlesex; county in central part of the State; area, 324 square miles.	Somerville. Princeton. Plainfield. New Brunswick. Sandy Hook. Staten Island.
Middletown; township in Monmouth County; area, 43 square miles	Sandy Hook.
Middletown; village in Upper Township, Cape May County.	Great Egg Harbor.
Middletown; village in Middletown Township, Monmouth County, on New York and Long Branch R. R	Sandy Hook.
Middleville; village in Stillwater Township, Sussex County, on Trout Brook	Wallpack.
Midland; township in Bergen County; area, 16 square miles.	Paterson.
Midland Park; village in Franklin and Ridgewood townships, Bergen County, on New York, Susquehanna and Western R. R	Paterson.
Midvale; village in Pompton Township, Passaic County, on Wanaque River and on New York and Greenwood Lake R. R	Greenwood Lake.
Midvale; village in Union Township, Hunterdon County, on Lehigh Valley R. R	High Bridge,
Midwood; village in Jackson Township, Ocean County	Cassville.
Mile; run, forming western boundary of New Brunswick City and tributary to Raritan River.	New Brunswick. Plainfield.
Mile; run in Shamong and Randolph townships, Burlington County, flowing into West Branch of Wading River	Pemberton.
Mile Thorofare; passage in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Milford; brook in Marlboro and Manalapan townships, Monmouth County, flowing into McGellaird Brook	New Brunswick.
Milford; village in East Windsor Township, Mercer County, on Millstone River	Princeton.
Milford; village in Waterford Township, Camden County, and Evesham Township, Burlington County	Mount Holly.
Milford; village in Holland Township, Hunterdon County, on Delaware River and on Pennsylvania R. R., Belvidere Division	Easton.
Mill; brook in Randolph Township, Morris County, tributary to Rockaway River	Lake Hoptacong.
Mill; brook in Montague Township, Sussex County, flowing into Delaware River	Port Jervis.
Mill; creek in Dennis Township, Cape May County	Sea Isle.
Mill; creek in Egg Harbor Township, Atlantic County, tributary to Patcong Creek	Great Egg Harbor.
Mill; creek in Fairfield Township, Cumberland County, flowing into Cohansey Creek	Bridgeton.
Mill; creek heading in Deerfield Township, forms partial boundary between it and Bridgeton Township, flows through portion of Millville Township, Cumberland County, into Maurice River	Bridgeton.
Mill; creek in Lower Township, Cape May County	Cape May.

	Names of sheets.
Mill; creek in Downe Township, Cumberland County, flowing into Dividing Creek	Bridgeton.
Mill; creek in Greenwich Township, Cumberland County, flowing into Molly Wheaten Run	Bayside.
Mill; creek in Berkeley Township, Ocean County, flowing into Toms River	Barnegat.
Mill; creek in North Bergen Township, Hudson County, tributary to Hackensack River	Paterson.
Mill; creek in Stafford Township, Ocean County, flowing into Little Egg Harbor.	Little Egg Harbor. Long Beach.
Mill; creek on boundary between Burlington and Willingboro townships, Burlington County, flowing into Rancocas Creek	Burlington.
Mill Branch; brook in Egg Harbor Township, Atlantic County, tributury to Patcong Creek	Great Egg Harbor.
Mill Thorofare; passage in coast swamp in Dennis Township, Cape May County	Sea Isle.
Millbrook; village in Pahaquarry Township, Warren County, on Vancampens Brook	Wallpack.
Millbrook; village in Randolph Township, Morris County, on Mill Brook	Lake Hopatcong.
Millburn; township in Essex County; area, 10 square miles.	Plainfield. Morristown.
Millburn; village in Millburn Township, Essex County, on Delaware, Lackawanna and Western R. R.	Plainfield.
Miller; creek in Upper Township, Cape May County, flowing into Peck Bay	Great Egg Harbor.
Millham; village in Hamiliton Township, Mercer County, on Pennsylvania R. R. and on Assanpink Creek	Bordentown.
Millington; village in Passaic Township, Morris County, on Passaic and Delaware R. R. and on Passaic River	Somerville.
Millstone; township in Monmouth County; area, 40 square miles.	Cassville. New Brunswick.
Millstone; river rising in Millstone Township, Monmouth County, flows northwest, forming boundary between Mercer and Middlesex counties, thence northward through Somerset County and enters the Raritan River.	Somerville. Princeton. New Brunswick. Cassville.
Millstone; village in Hillsboro Township, Somerset County, on Millstone River, opposite East Millstone.	Somerville. Princeton.
Milltown; borough in North Brunswick Township, Middlesex County, on Lawrence Brook	New Brunswick.
Milltown; village in Kingwood Township, Hunterdon County, on Lockatong Creek	Doylestown.
Milltown; village in Springfield Township, Union County, on East Branch of Rahway River	Plainfield.
Milltown; village in Branchburg Township, Somerset County, on North Branch of Raritan River	Somerville.
Millville; township in Cumberland County; area, 46 square miles.	Bridgeton. Tuckahoe.
Millville; city in Millville Township, Cumberland County, on Maurice River	Bridgeton.
Millville; village in Ocean Township, Ocean County	Whitings.
Milton; village in Vernon Township, Sussex County	Port Jervis.
Milton; village in Jefferson Township, Morris County	Franklin.

	Names of sheets.
Mine; brook in Bernard Township, Somerset County, tributary to North Branch of Raritan River	Somerville.
Mine Hill; village in Randolph Township, Morris County	Lake Hopatcong.
Minisink; island off coast of Montague and Sandston townships, Sussex County, in Delaware River	Milford.
Minnisink; village in Jefferson Township, Morris County	Lake Hopatcong.
Miry Run; brook on boundary between Hamilton and Egg Harbor townships, flowing into Great Egg Harbor River	Great Egg Harbor.
Miry Run; brook in Washington and Hamilton townships, Mercer County, tributary to Assanpink Creek	Bordentown.
Molly Wheaten Run; brook in Greenwich Township, Cumberland County, flowing into Cohansey Creek	Bayside.
Moonachie; village in Lodi Township, Bergen County	Paterson.
Moore; creek in Hopewell Township, Mercer County, tributary to Delaware River	Lambertville.
Moorestown; village in Chester Township, Burlington County, on Pennsylvania R. R	Mount Holly.
Mooseback; pond in Jefferson Township, Morris County	Franklin.
Monds; island in Delaware River off coast of Greenwich Township, Gloucester County	Chester.
Money; islands in Toms River in Dover Township, Ocean County	Barnegat.
Money; island in swamp in Independence Township, Warren County	Hackettstown.
Monks; village in Pompton Township, Passaic County, on Wanaque River and on New York and Greenwood Lake R. R	Greenwood Lake.
Monmouth; county in central part of State; area, 538 square miles.	Bordentown. Cassville. New Brunswick. Sandy Hook. Asbury Park.
Monmouth; park in Eatontown Township, Monmouth County	Sandy Hook.
Monmouth Beach; life-saving station on reef in Ocean Township, Monmouth County	Sandy Hook.
Monmouth Beach; village in Ocean Township, Monmouth County, on New York and Long Branch R. R	Sandy Hook.
Monmouth Junction; village in South Brunswick Township, Middlesex County, on Pennsylvania R. R	Princeton.
Monongahela; brook in Deptford Township, Gloucester County, tributary to Mantua Creek	Philadelphia.
Monroe; township in Middlesex County; area, 44 square miles	New Brunswick.
Monroe; township in Gloucester County; area, 46 square miles.	Hammonton. Glassboro.
Monroe; village in Hanover Township, Morris County	Morristown.
Monroe Corner; village in Sparta Township, Sussex County, on Sussex R. R	Franklin.
Monroe Forge; village in Weymouth Township, Atlantic County, on South River	Tuckahoe.
Monroeville; village in Franklin Township, Gloucester County	Glassboro.
Monroeville; village in Franklin Township, Gloucester County, on West Jersey R. R	Glassboro.

	Names of sheets.
Montague; township in Sussex County; area, 45 square miles.	Milford. Port Jervis. Franklin. Wallpack.
Montague; village in Montague Township, Sussex County, on Delaware River	Milford.
Montana; village in Harmony Township, Warren County...	Delaware Water Gap.
Montclair; township in Essex County; area, 6 square miles.	Paterson.
Montclair; town in Montclair Township, Essex County, on New York and Greenwood Lake R. R., and on Bloomfield Branch of Delaware, Lackawanna and Western R. R	Paterson.
Montclair Heights; village in Montclair Township, Essex County, on New York and Greenwood Lake R. R	Paterson.
Montgomery; township in Somerset county; area, 33 square miles	Princeton.
Montgomery; village in Hillsboro Township, Somerset County	Lambertville.
Montvale; village in Washington Township, Bergen County, on New Jersey and New York R. R	Ramapo.
Montville; village in Montville Township, Morris County, on Morris Canal, and on Boonton Branch of Delaware, Lackawanna and Western R. R	Morristown.
Montville; township in Morris County; area, 19 square miles.	Morristown.
Mordecai; island in Little Egg Harbor, in Eaglewood Township, Ocean County	Little Egg Harbor.
Morgan; village in Sayreville Township, Middlesex County.	New Brunswick.
Morganville; village in Marlboro Township, Monmouth County, on Freehold and New York R. R	Sandy Hook.
Morris; township in Morris County; area, 19 square miles..	Morristown. Lake Hopatcong.
Morris; county in northern part of State; area, 480 square miles.	Greenwood Lake. Franklin. Morristown. Plainfield. Somerville. Lake Hopatcong. Hackettstown. High Bridge.
Morris; canal connecting Phillipsburg on the Delaware with Hudson River at Jersey City.	Easton. Delaware Water Gap. Hackettstown. Lake Hopatcong. Morristown. Paterson. Staten Island.
Morris; pond in Sparta Township, Sussex County	Franklin.
Morris County Junction; village in Roxbury Township, Morris County	Lake Hopatcong
Morris Plains; village in Hanover Township, Morris County, on Delaware, Lackawanna and Western R. R	Morristown.
Morris Spring; brook in Randolph Township, Morris County, tributary to Jackson Brook	Lake Hopatcong.
Morris Station; village in Stockton Township, Camden County, on Pensauken River and on Pennsylvania R. R..	Philadelphia.

	Names of sheets.
Morristown; village in Madison Township, Middlesex County.	New Brunswick.
Morristown; city in Morris Township, Morris County, on Whippany River, and on Delaware, Lackawanna and Western R. R.	Morristown.
Morrisville; village in Stockton Township, Camden County.	Philadelphia.
Morrisville; village in Holmdel Township, Monmouth County.	Sandy Hook.
Morses; creek in Linden Township, Union County, tributary to Arthur Kill	Staten Island.
Mosquito; cove projecting from Barnegat Bay into Dover Township, Ocean County	Barnegat.
Mounce; creek on boundary between Hopewell and Greenwich townships, Cumberland County, flowing into **Cohansey** Creek	Bayside.
Mount; village in Washington Township, Burlington County.	Mullica.
Mount Airy; village in West Amwell Township, Hunterdon County	Lambertville.
Mount Bethel; village in Mansfield Township, Warren County.	Hackettstown.
Mount Bethel; village in Warren Township, Somerset County.	Somerville.
Mount Ephraim; village in Center Township, Camden County, at terminus of Camden, Gloucester and Mount Ephraim R. R.	Philadelphia.
Mount Fern; hill in Randolph Township, Morris County; altitude, 1,003 feet	Lake Hopatcong.
Mount Freedom; village in Randolph Township, Morris County	Lake Hopatcong.
Mount Herman; village in Hope Township, Warren County.	Hackettstown.
Mount Holly; hill in Northampton Township, Burlington County; elevation, 180 feet	Burlington.
Mount Holly; village in Northampton Township, Burlington County, on Rancocas Creek.	Mount Holly. Burlington.
Mount Hope; village in Rockaway Township, Morris County, on High Bridge Branch of Central R. R. of New Jersey	Lake Hopatcong.
Mount Horeb; village in Warren Township, Somerset County.	Somerville.
Mount Jemima; hill in Washington Township, Burlington County	Mullica.
Mount Joy; village in Holland Township, Hunterdon County, on Delaware River and on Pennsylvania R. R., Belvidere Division	Easton.
Mount Laurel; township in Burlington County; area, 22 square miles	Mount Holly.
Mount Laurel; hill in Mount Laurel Township, Burlington County; elevation, 173 feet	Mount Holly.
Mount Mills; village in Monroe Township, Middlesex County, on Matchaponix Brook	New Brunswick.
Mount Misery; brook heading in three branches, North, Middle, and South branches, tributary to North Branch of Rancocas Creek, in Manchester Township, Ocean County, and Woodland and Pembertown townships, Burlington County.	Whitings. Pemberton.
Mount Misery; village in Pemberton Township, Burlington County, on Mount Misery Brook	Pemberton.
Mount Olive; township in Morris County; area, 32 square miles.	Hackettstown. Lake Hopatcong.

	Names of sheets.
Mount Olive; village in Mount Olive Township, Morris County, on Turkey Brook	Lake Hopatcong.
Mount Pisgah; village in Frankford Township, in Sussex County, on Paulins Kill	Wallpack.
Mount Pleasant; hills in Marlboro and Holmdel townships, Monmouth County	Sandy Hook.
Mount Pleasant; village in Pilesgrove Township, Salem County	Salem.
Mount Pleasant; village in Matawan Township, Monmouth County, on Freehold and New York R. R	Sandy Hook.
Mount Pleasant; village in Dennis Township, Cape May County, on West Jersey R. R	Dennisville
Mount Pleasant; village in Egg Harbor Township, Atlantic County	Great Egg Harbor.
Mount Pleasant; village in Alexandria Township, Hunterdon County, on Harihokake Creek	Easton.
Mount Rose; village in Hopewell Township, Mercer County.	Princeton.
Mount Royal; village in East Greenwich Township, Gloucester County, on West Jersey R. R	Philadelphia.
Mount Salem; village in Wantage Township, Sussex County.	Port Jervis.
Mountain; village in South Orange Township, Essex County, on Delaware, Lackawanna and Western R. R	Morristown.
Mountain; pond in Roxbury Township, Morris County	Lake Hopatcong.
Mountain View; village in Wayne Township, Passaic County, on Pompton River, on Morris Canal, and on New York and Greenwood Lake R. R	Morristown.
Mountainville; village in Tewksbury Township, Hunterdon County, on North Branch of Rockaway Creek	High Bridge.
Mowers; village in Upper Alloways Creek Township, Salem County, on West Jersey R. R	Salem.
Muckshaw; pond in Andover Township, Sussex County	Wallpack.
Mud; pond in Pompton Township, Passaic County	Greenwood Lake.
Mud; pond in Vernon Township, Sussex County	Franklin.
Mud; pond in Stillwater Township, Sussex County	Wallpack.
Mud; pond in Hardwick Township, Warren County	Wallpack.
Mud Thorofare; passage in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Mud Thorofare; passage in coast swamp in Dennis Township, Cape May County	Sea Isle.
Muddy; brook in Hope Township, Warren County, tributary to Honey Run	Hackettstown.
Muddy; creek in Lower Alloways Creek Township, Salem County, flows into Delaware River	Bayside.
Muddy; run in Bedminster Township, Somerset County, tributary to Lamington River	Somerville.
Muddy Ford; brook in Howell Township, Monmouth County, flows into Metedeconk River	Asbury Park.
Muddy Hole; passage in coast swamp in Middle Township, Cape May County	Dennisville.
Muirheads; village in Raritan Township, Hunterdon County, on Flemington Branch, Belvidere Division, Pennsylvania R. R	Lambertville.
Mulford; creek in Middle Township, Cape May County, flowing into Scotch Bonnet	Dennisville.

	Names of sheets.
Mulford Station; village in Andover Township, Sussex County, on Lehigh and Hudson River R. R	Franklin.
Mulhockaway; creek rising in Bethlehem and Union townships, Hunterdon County, tributary to Spruce Run	High Bridge.
Mullica; township in Atlantic County; area, 55 square miles.	Hammonton. Mullica.
Mullica, or Atsion; river rising in Waterford Township, Camden County, flows southeast, forming boundary between Burlington County on the north and Camden and Atlantic counties on the south, into Great Bay.	Mount Holly. Hammonton. Mullica. Little Egg Harbor.
Mullica Hill; village in Harrison Township, Gloucester County	Glassboro.
Munion Field; village in Bass River Township, Burlington County	Little Egg Harbor.
Murray Hill; village in New Providence Township, Union County, on Passaic and Delaware R. R	Plainfield.
Murrell Branch; brook in Winslow Township, Camden County, flows into Great Egg Harbor River	Hammonton.
Musconetong; mountain ridge extending through western part of Hunterdon County.	Easton. High Bridge.
Musconetong; village in Pohatcong Township, Warren County, at junction of Musconetong River with Delaware River on Pennsylvania R. R., Belvidere Division	Easton.
Musconetong; valley lying between Warren and Hunterdon counties	Easton.
Musconetong; river draining Lake Hopatcong in Sussex County, flows southwest, forming boundary between Morris, Sussex, Hunterdon, and Warren counties, into Delaware River at southwest extremity of Warren County.	Lake Hopatcong. Hackettstown. High Bridge. Easton.
Muskee; creek rising in Maurice River Township, Cumberland County, flowing into Maurice River	Tuckahoe.
Muskingum; brook in Shamong Township, Burlington County, tributary to Springer Creek	Pemberton.
Musquapsink; creek in Washington Township, Bergen County, tributary to Pascock Creek	Paterson.
Myrtle; village in Hampton Township, Sussex County	Wallpack.
Nacote; creek in Galloway Township, Atlantic County, flowing into Mullica River.	Mullica. Little Egg Harbor. Great Egg Harbor.
Nantuxent; creek in boundary between Downe and Lawrence townships, Cumberland County, flowing into Delaware River	Bridgeton.
Nantuxent; point on coast of Downe Township, Cumberland County	Bridgeton.
Naughright; village in Washington Township, Morris County, on South Branch of Raritan River	Lake Hopatcong
Navesink; village in Middeltown Township, Monmouth County	Sandy Hook.
Navesink; river on boundary between Middletown and Shrewsbury townships, Monmouth County, flowing into Sandy Hook Bay	Sandy Hook.
Navesink; lights on Highlands of Navesink	Sandy Hook.
Navesink Avenue; village in Middletown Township, Monmouth County	Sandy Hook.

	Names of sheets.
Navesink Beach; village on reef in Middletown Township, Monmouth County, on New York and Long Branch R. R.	Sandy Hook.
Navesink Park; seaside village in Middletown Township, Monmouth County	Sandy Hook.
Neal Branch; brook in Weymouth Township, Atlantic County, flowing into Tuckahoe River	Tuckahoe.
Nell Run; brook in Egg Harbor Township, Atlantic County, flowing into English Creek	Great Egg Harbor.
Neptune; township in Monmouth County; area, 13 square miles	Asbury Park.
Neptune; village in Neptune Township, Monmouth County.	Asbury Park.
Nescochaque; creek in Hammonton and Mullica townships, Atlantic County, flowing into Mullica River	Mullica.
Neshanic; village in Hillsboro Township, Somerset County.	Princeton.
Neshanic; river heading in Raritan and Delaware townships, Hunterdon County, flowing into South Branch of Raritan River in Hillsboro Township, Somerset County,	Lambertville. Princeton. Somerville.
Neshanic Station; village in Branchburg Township, Somerset County, on South Branch of Raritan River, on South Branch R. R., and on Lehigh Valley R. R.	Somerville.
Netherwood; village, part of Plainfield City, Union County, on Green Brook, and on Central R. R. of New Jersey	Plainfield.
Neuvy; village in Harrington Township, Bergen County, on Northern R. R. of New Jersey	Tarrytown.
New Albany; village in Cinnaminson Township, Burlington County	Burlington.
New Barbadoes; township in Bergen County; area, 4 square miles	Paterson.
New Bedford; village in Wall Township, Monmouth County.	Asbury Park.
New Bridge; village in Palisade and Englewood townships, Bergen County, on Hackensack River	Paterson.
New Brooklyn; village in Piscataway Township, Middlesex County, on Lehigh Valley R. R. and on Bound Brook	Plainfield.
New Brooklyn; village in Winslow Township, Camden County, on Great Egg Harbor River	Hammonton.
New Brunswick; city in Middlesex County, on Raritan River and on Pennsylvania R. R.	New Brunswick. Plainfield.
New Columbia; village in Mullica Township, Atlantic County	Mullica.
New Dover; village in Raritan Township, Middlesex County	Plainfield.
New Durham; village in Raritan Township, Middlesex County	Plainfield.
New Durham; village in North Bergen Township, Hudson County, on Northern R. R. of New Jersey, West Shore R. R., and New York, Susquehanna and Western R. R.	Paterson.
New Egypt; town in Plumstead Township, Ocean County, on North Run, and on Pemberton and Hightstown R. R.	Bordentown.
New England; creek in Commercial Township, Cumberland County, flowing into Maurice River Cove	Maurice Cove.
New England Cross Roads; village in Fairfield Township, Cumberland County	Bridgeton.

	Names of sheets.
Newfoundland; town in West Milford Township, Passaic County, on Pequannock River and on New York, Susquehanna and Western R. R	Greenwood Lake.
New Freedom; village in Winslow Township, Camden County, on New Jersey Southern R. R	Mount Holly.
New Freedom; village in Upper Pittsgrove Township, Salem County	Glassboro.
New Germantown; village in Tewksbury Township, Hunterdon County.	High Bridge. Somerville.
New Germany; village in Buena Vista Township, Atlantic County, on Penny Pot Stream	Hammonton.
New Gretna; village in Bass River Township, Burlington County	Little Egg Harbor.
New Hampton; village in Lebanon Township, Hunterdon County, on Musconetong River and on Delaware, Lackawanna and Western R. R	High Bridge.
New Hanover; township in Burlington County; area, 41 square miles.	Bordentown. Pemberton.
New Lisbon; village in Pemberton Township, Burlington County, on Philadelphia and Long Branch R. R	Pemberton.
New Market; village in West Amwell Township, Hunterdon County	Lambertville.
New Market; village in Piscataway Township, Middlesex County, on Lehigh Valley R. R., and on Bound Brook...	Plainfield.
New Milford; village in Midland Township, Bergen County, on Hackensack River, and on New Jersey and New York R. R	Paterson.
New Monmouth; village in Middletown Township, Monmouth County	Sandy Hook.
New Prospect; village in Jackson Township, Ocean County.	Cassville.
New Providence; village in New Providence Township, Union County	Plainfield.
New Providence; township in Union County; area, 10 square miles	Plainfield.
New Vernon; village in Passaic Township, Morris County .	Plainfield.
New Village ; village in Franklin Township, Warren County, on Morris Canal and on Pohatcong Creek	Easton.
New York Upper; bay, an arm of Atlantic Ocean, separating Hudson County, N. J., New York City, and Staten Island.	Staten Island.
Newark; city in Essex County on Passaic River and on Newark Bay; area, 21 square miles.	Paterson. Staten Island.
Newark; bay separating Hudson County from Essex and Union counties and Staten Island	Staten Island.
Newbakers Corners; village in Hardwick Township, Warren County	Wallpack.
Newbold; island in Delaware River in Mansfield Township, Burlington County.	Burlington. Bordentown.
Newbold Branch; brook in Lacey Township, Ocean County, flowing into Daniel Branch	Whitings.
Newbold Run; brook in New Hanover and Pemberton townships, Burlington County, flowing into Rancocas Creek	Bordentown. Pemberton.
Newell; village in Egg Harbor Township, Atlantic County, on West Jersey R. R	Great Egg Harbor.
Newfield; *village in Franklin Township*, Gloucester County.	Glassboro.

	Names of sheets.
Newkirk; village in Upper Pittsgrove Township, Salem County, on West Jersey R. R.	Glassboro.
Newport; town in Downe Township, Cumberland County	Bridgeton.
Newport; village in Lebanon Township, Hunterdon County, on Spruce River	High Bridge.
Newport; creek on boundary between Stow Creek and Greenwich townships, Cumberland County, flowing into Stow Creek	Bayside.
Newport; landing in Downe Township, Cumberland County, on Nantuxent Creek	Bridgeton.
Newport; station in Downe Township, Cumberland County, on Nantuxent Creek	Bridgeton.
Newton; township in Sussex County; area, 3 square miles.	Wallpack. Franklin.
Newton; town coextensive with Newton Township, Sussex County, on Sussex R. R.	Franklin. Wallpack.
Newton; creek in Haddon Township, Camden County; formed by three branches, Main Branch, North Branch, and South Branch, flows west into Delaware River north of Gloucester City	Philadelphia.
Newton, or Pine; creek rising in Mullica Township, flows northeast, entering Egg Harbor City, Atlantic County, where it flows into Mullica River	Mullica.
Newtonville; village in Buena Vista Township, Atlantic County	Hammonton.
Newtown; village in Washington Township, Mercer County.	Bordentown.
Newtown; village in Piscataway Township, Middlesex County, on Ambrose Brook	Plainfield.
Nicholas; channel in Middle Township, Cape May County, connecting Genesis Bay with Dung Thorofare	Dennisville.
Nihomus Run; brook in Pilesgrove Township, Salem County, flowing into Salem Creek	Salem.
Nishayne; brook in Montclair and Orange townships, Essex County, tributary to Second River	Paterson.
Nishisakawick; creek in Alexandria Township, Hunterdon County, tributary to Delaware River	Easton.
Nixon Branch; brook in Maurice River Township, Cumberland County, tributary to Muskee Creek	Tuckahoe.
No More; mountain in Oxford Township, Warren County; altitude, 1,140 feet	Delaware Water Gap.
No Pike; brook in Montgomery Township, Somerset County, tributary to Bedens Brook	Princeton.
Nolans; point of land projecting from coast of Jefferson Township, Morris County, into Lake Hopatcong, and is the southern terminus of Ogden Mine R. R	Lake Hopatcong.
Nordhoff; village in Englewood Township, Bergen County.	Harlem.
Normahiggin; brook in Westfield and Cranford townships, Union County, tributary to Rahway River	Plainfield.
North; hill in Shrewsbury Township, Monmouth County; elevation, 169 feet	Sandy Hook.
North Bergen; township in Hudson County; area, 12 square miles.	Paterson. Harlem.
North Branch; village in Branchburg Township, Somerset County, on North Branch of Raritan River	Somerville.

	Names of sheets.
North Branch Depot; village in Branchburg Township, Somerset County, at junction of Chambers Brook with North Branch of Raritan River and on Central R. R. of New Jersey	Somerville.
North Brunswick; township in Middlesex County; area, 14 square miles.	New Brunswick. Princeton.
North Channel; passage in coast swamp in Middle Township, Cape May County	Sea Isle.
North Church; village in Hardyston Township, Sussex County.	Franklin.
North Long Branch; village in Ocean Township, Monmouth County, on Atlantic Ocean, and on New York and Long Branch R. R.	Sandy Hook.
North Newark; village, part of Newark City, Essex County, at junction of Second River with Passaic River and where the Paterson and Newark Branch of New York, Lake Erie and Western R. R. crosses the New York and Greenwood Lake R. R	Paterson.
North Paterson; village in Manchester Township, Passaic County	Paterson.
North Pennsville; village in Cinnaminson Township, Burlington County, on Pensauken Creek	Philadelphia.
North Plainfield; township in Somerset County; area, 14 square miles.	Somerville. Plainfield.
North Run; brook in Springfield and New Hanover townships, Burlington County, tributary to Crosswick Creek.	Bordentown.
North Vineland; village in Landis Township, Cumberland County, on West Jersey R. R.	Glassboro.
Northampton; township in Burlington County; area, 2 square miles.	Burlington. Mount Holly.
Northfield; village in Livingston Township, Essex County, on Canoe Brook	Morristown.
Northville; village in Deerfield Township, Cumberland County	Glassboro.
Norton; village in Union Township, Hunterdon County.	High Bridge.
Norton; brook in Mullica Township, Atlantic County, flowing into Hammonton Creek	Mullica.
Nortonville; village in Logan Township, Gloucester County.	Chester.
Norwood; village in Harrington Township, Bergen County, on Northern R. R. of New Jersey	Harlem.
Nugentown; village in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Nummy; swampy island in Middle Township, Cape May County	Dennisville.
Nummytown; village in Middle Township, Cape May County	Dennisville.
Nut Swamp; brook in Middletown Township, Monmouth County, flowing into Navesink River	Sandy Hook.
Nutby; village in Franklin Township, Essex County, on Paterson and Newark Branch of New York, Lake Erie and Western R. R.	Paterson.
Oak; island in coast swamp in Bass River Township, Burlington County	Little Egg Harbor.
Oak Grove; village in Franklin Township, Hunterdon County.	High Bridge.
Oak Hill; village in Middletown Township, Monmouth County	Sandy Hook.

	Names of sheets.
Oak Ridge; village in West Milford Township, Passaic County, on Pequannock River and on New York, Susquehanna and Western R. R	Greenwood Lake.
Oak Tree; village in Raritan Township, Middlesex County, on Lehigh Valley R. R	Plainfield.
Oakdale; village in Delaware Township, Hunterdon County, on Flemington Branch, Belvidere Division	Lambertville.
Oakdale Station; village in Haddon Township, Camden County, on Philadelphia and Reading R. R	Philadelphia.
Oakey; brook in South Brunswick Township, Middlesex County, tributary to Cow Yard Brook	Princeton.
Oakland; village in Upper Alloways Creek Township, Salem County, on West Jersey R. R	Salem.
Oakland; village in Franklin Township, Bergen County, on New York, Susquehanna and Western R. R	Ramapo.
Oakland Mills; village in Manalapan Township, Monmouth County	Cassville.
Oakville; village in Weymouth Township, Atlantic County.	Tuckahoe.
Obhonan Ridgway Branch; brook in Jackson Township, Ocean County, flowing into Ridgway Branch	Cassville.
Ocean; township in Ocean County; area, 34 square miles ..	Whitings. Barnegat.
Ocean; township in Monmouth County; area, 25 square miles	Asbury Park. Sandy Hook. Long Beach.
Ocean; county in east central part of the State; area, 676 square miles.	Bordentown. Pemberton. Cassville. Asbury Park. Whitings. Barnegat. Little Egg Harbo Long Beach.
Ocean Beach; borough in Wall Township, Monmouth County, on New York and Long Branch R. R. and on Atlantic coast	Asbury Park.
Ocean City; borough on coast of Cape May County	Great Egg Harbo
Ocean City; life-saving station at Ocean City	Great Egg Harbo
Ocean Grove; town and summer resort in Neptune Township, Monmouth County, on New York and Long Branch R. R. and on Atlantic ocean	Asbury Park.
Ocean Park; village in Neptune Township, Monmouth County	Asbury Park.
Ocean View; village in Dennis Township, Cape May County, on West Jersey R. R	Sea Isle.
Oceanic; towns in Shrewsbury Township, Monmouth County, on Navesink River	Sandy Hook.
Oceanport; village in Eatontown Township, Monmouth County	Sandy Hook.
Oceanville; village in Galloway Township, Atlantic County.	Atlantic City.
Ogden; village in West Deptford Township, Gloucester County, on West Jersey R. R	Philadelphia.
Ogden; creek in Fairfield Township, Cumberland County, tributary to Back Creek.	Bridgeton. Bayside.
Ogden; creek in Downe Township, Cumberland County, flowing into Dividing Creek.	Bridgeton. Maurice Cove.

	Names of sheets.
Ogdensburg; village in Sparta Township, Sussex County, on Sussex R. R., and on New York, Susquehanna and Western R. R	Franklin.
Old; light-house on coast of Greenwich Township, Cumberland County	Bayside.
Old Boonton; village in Hanover Township, Morris County, on Rockaway River	Morristown.
Old Bridge; village in East Brunswick Township, Middlesex County, on South River, and on Camden and Amboy Branch Pennsylvania R. R	New Brunswick.
Old Church; village in Monroe Township, Middlesex County.	New Brunswick.
Old Half Way; village in Manchester Township, Ocean County	Whitings
Old Hatch; creek in Fairfield Township, Cumberland County, flowing into Back Creek	Bayside.
Old Hurricane; brook in Manchester Township, Ocean County, flowing into Union Branch of Toms River.	Cassville. Whitings.
Old Robin; brook in Dennis Township, Cape May County, tributary to Dennis Creek	Dennisville.
Old Sams; pond in Brick Township, Ocean County	Asbury Park.
Old Turtle Thorofare; passage in coast swamp in Middle Township, Cape May County	Dennisville.
Oldham; brook rising in Franklin Township, Bergen County, flows through Manchester Township, Passaic County, and Paterson City, thence into Passaic River	Paterson.
Oldman; creek rising in South Harrison Township, Gloucester County, flowing northwest on boundary between Gloucester and Salem counties, into Delaware River.	Salem. Glassboro.
Oldman; creek in Middle Township, Cape May County, flowing into Great Channel	Dennisville.
Oldman; creek on boundary between Salem and Gloucester counties, flowing into Delaware River	Chester.
Oldman; township in Salem County; area, 21 square miles.	Salem.
Oldman; point projecting from Oldman Township, Salem County, into Delaware River	Chester.
Ongs Hat; village in Pemberton Township, Burlington County	Pemberton.
Ongs Run; brook in Pemberton Township, Burlington County, flowing into Newbold Run	Pemberton.
Oradell; village in Midland Township, Bergen County, on Hackensack River and on New Jersey and New York R. R.	Paterson.
Orange; city in Essex County, on Orange Branch of New York and Greenwood Lake R. R., and on Morris and Essex Division Delaware Lackawanna and Western R. R.	Paterson. Morristown.
Orange Valley; village, part of Orange City, Essex County, on Morris and Essex Division, Delaware, Lackawanna and Western R. R	Paterson.
Oranoaken; creek in Downe Township, Cumberland County, flowing into Maurice River Cove.	Bridgeton. Maurice Cove.
Ore Spring; brook in Woodland and Shamong townships, Burlington County, flowing into Feather Bed Brook	Pemberton.
Ortley; village on reef in Dover Township, Ocean County, on Philadelphia and Long Branch R. R	Barnegat.
Orvil; township in Bergen County; area, 17 square miles	Paterson. Ramapo.

	Names of sheets.
Osborne; island in Manasquan River off coast of Brick Township, Ocean County	Asbury Park.
Osborne; island in coast swamp in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Oswego; river in Ocean and Burlington counties, tributary to Wading River.	Whitings. Little Egg Harbor. Mullica.
Otter; brook in Center and Gloucester townships, Camden County, tributary to North Branch of Timber Creek	Philadelphia.
Overpeck; creek rising in Palisade Township, flows west into Hackensack River in Ridgefield Township, Bergen County.	Paterson. Harlem.
Overton; village in Palisade Township, Bergen County, on Hackensack River and on New Jersey and New York R. R.	Paterson.
Oxford; township in Warren County; area, 34 square miles.	Delaware Water Gap. Hackettstown.
Oxford Church; village in Oxford Township, Warren County, on Pophandusing Brook. P. O. Hazen	Delaware Water Gap,
Oxford Furnace; town in Oxford Township, Warren County, on Delaware, Lackawanna and Western R. R.	Delaware Water Gap. Hackettstown.
Oyster; creek in coast swamp in Downe Township, Cumberland County	Maurice Cove.
Oyster; creek rising in Ocean Township, flows northeast, forming partial boundary between Lacey and Ocean townships, Ocean County, into Barnegat Bay.	Whitings. Barnegat.
Oyster; creek in Elizabeth City, tributary to Newark Bay	Staten Island.
Oyster; creek in Middle Township, Cape May County, flowing into Cresse Thorofare	Dennisville.
Oyster; cove projecting from Delaware River into Lower Alloways Creek Township, Salem County	Bayside.
Oyster Thorofare; passage in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Pavonia; village in Stockton Township, Camden County, on Delaware River, at junction of Amboy Division with Pennsylvania R. R	Philadelphia.
Packer; island in South Branch of Raritan River between Readington and Raritan townships, Hunterdon County.	High Bridge.
Paddy Thorofare; passage in coast swamp in Middle Township, Cape May County	Dennisville.
Padgett; creek in Downe Township, Cumberland County, flowing into Delaware River	Bridgeton.
Pahaquarry; township in Warren County; area, 21 square miles.	Wallpack. Bushkill Falls. Delaware Water Gap.
Paint Branch; brook in Manchester Township, Ocean County, flowing into Manapaqua Branch	Cassville.
Palmyra; town in Cinnaminson Township, Burlington County, on Pennsylvania R. R	Philadelphia.
Palatine; village in Pittsgrove Township, Salem County, on West Jersey R. R	Glassboro.
Palermo; village in Upper Township, Cape May County	Great Egg Harbor.
Palisade; township in Bergen County; area, 16 square miles.	Harlem. Paterson.
Palmyra; village in Alexandria Township, Hunterdon County.	Easton.

	Names of sheets.
Pamrapo; part of Bayonne City, on New York Upper Bay and on Central R. R. of New Jersey	Staten Island.
Pancoast Branch; brook in Maurice River Township, Cumberland County, tributary to Muskee Creek	Tuckahoe.
Pancoast Mill; village in Buena Vista Township, Atlantic County, on Deep Run	Hammonton.
Panther; pond in Byram Township, Sussex County	Lake Hopatcong.
Panther Branch; brook in Buena Vista Township, Atlantic County, and Landis Township, Cumberland County, tributary to Manantico Creek	Tuckahoe.
Papakating; village in Wantage Township, Sussex County, on New York, Susquehanna and Western R. R.	Franklin.
Papakating; village in Frankford Township, Sussex County, on Papakating Creek	Franklin.
Papakating; creek in Frankford and Wantage townships, Sussex County, flowing into Wallkill River	Franklin.
Pappoose Branch; brook rising in Woodland Township, flows southwest, forming boundary between Randolph and Bass River townships, into Oswego River.	Whitings. Little Egg Harbor.
Paradise; village in West Deptford Township, Gloucester County, on Delaware River R. R.	Philadelphia.
Paradise; village in Upper Freehold Township, Monmouth County	Cassville.
Paramus; village in Ridgewood Township, Bergen County, on Saddle River	Paterson.
Park Ridge; village in Washington Township, Bergen County, on New Jersey and New York R. R.	Ramapo.
Parkdale; village in Waterford Township, Camden County on New Jersey Southern R. R.	Hammonton.
Parker; mine situated in central part of Vermont Township, Sussex County	Greenwood Lake.
Parker; creek in Shrewsbury and Eatontown townships, Monmouth County, flowing into Shrewsbury River	Sandy Hook.
Parker; creek in Mount Laurel Township, on boundary between Mount Laurel and Chester townships, Burlington County, flowing into Rancocas Creek	Mount Holly.
Parker; island in Little Egg Harbor, Eagleswood Township, Ocean County	Long Beach.
Parker; island in Little Egg Harbor, in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Parker; cove projecting from Little Egg Harbor into Eagleswood Township, Ocean County	Little Egg Harbor.
Parker; brook in Little Egg Harbor Township, Burlington County, and Eagleswood Township, Ocean County, flowing into Parker Cove	Little Egg Harbor.
Parkertown; village in Little Egg Harbor Township, Burlington County, on Tuckahoe R. R.	Little Egg Harbor.
Parkville; village in West Deptford Township, Gloucester County, on West Jersey R. R.	Philadelphia.
Parry; village in Cinnaminson Township, Burlington County.	Burlington.
Parsippany; town in Hanover Township, Morris County, on Troy Brook	Morristown.
Parsonage Run; brook in Deerfield Township, Cumberland County, flowing into Foster Run.	Glassboro. Bridgeton.

	Names of sheets.
Parvin Branch; brook on boundary between Bridgeton and Fairfield townships, Cumberland County, flowing into Cohansey Creek	Bridgeton.
Parvin Branch; brook in Landis Township, Cumberland County, flowing into Maurice River	Bridgeton
Pascock; creek in Rockland and Washington townships, Bergen County, flowing into Hackensack River.	Ramapo. Paterson. Harlem.
Passaic; county in northeast part of the State; area, 200 square miles.	Greenwood Lake. Ramapo. Morristown. Paterson.
Passaic; township in Morris County; area, 33 square miles.	Morristown. Plainfield. Somerville. Lake Hopatcong.
Passaic; city in Passaic County	Paterson.
Passaic; river in northern New Jersey, flows into Newark Bay at Newark.	Lake Hopatcong. Somerville. Plainfield. Morristown. Paterson. Staten Island.
Passaic Bridge; part of Passaic City, on Passaic River where the New York, Lake Erie and Western R. R. crosses the river	Paterson.
Patcong; creek in Egg Harbor Township, Atlantic County, flowing into Great Egg Harbor	Great Egg Harbor.
Paterson; city in Passaic County, on Passaic River, and on Morris Canal; area, 8 square miles	Paterson.
Pattenburg; village in Union Township, Hunterdon County, on Lehigh Valley R. R	Easton.
Paulding; village in Pilesgrove Township, Salem County, on West Jersey R. R	Salem.
Paulina; village in Blairstown Township, Warren County, on Paulins Kill and on New York, Susquehanna and Western R. R	Hackettstown.
Paulins Kill; river in Sussex and Warren counties, flowing into Delaware River.	Franklin. Hackettstown. Wallpack. Delaware Water Ga
Paulsboro; town in Greenwich Township, Gloucester County, on Mantua Creek and on Delaware River R. R	Philadelphia.
Peapack; brook heading in Chester Township, Morris County, flows into North Branch of Raritan River in Bedminster Township, Somerset County	Somerville.
Peapack; village in Bedminister Township, Somerset County, on Peapack Brook	Somerville.
Peck; beach on coast of Upper Township, Cape May County.	Sea Isle. Great Egg Harbor
Peck; bay in Upper Township, Cape May County, flows into Great Egg Harbor	Great Egg Harbor
Peck Beach; life-saving station on coast of Upper Township, Cape May County	Sea Isle.
Pecks Corner; village in Quinton Township, Salem County.	Salem.

	Names of sheets.
eckman; brook rising in West Orange Township, flows through Caldwell Township, Essex County, into Passaic River in Little Falls Township, Passaic County	Paterson.
edricktown; village in Oldman Township, Salem County	Chester.
emberton; township in Burlington County; area, 65 square miles.	Pemberton. Whitings. Bordentown.
Pemberton; borough in Pemberton Township, Burlington County, on Rancocas Creek and on Camden and New Jersey Southern railroads	Pemberton.
enbyrn; village in Winslow Township, Camden County	Mount Holly.
enhorn; creek in North Bergen Township, Hudson County, tributary to Hackensack River	Paterson.
enn Place; village in Randolph Township, Burlington County	Little Egg Harbor.
ennington; town in Hopewell Township, Mercer County, on New York Division, Philadelphia and Reading R. R	Lambertville.
ennington; island off coast of Kingwood Township, Hunterdon County, in Delaware River	Easton.
ennsgrove; borough in Upper Penns Neck Township, Salem County, on Delaware River	Salem.
enns Neck; village in West Windsor Township, Mercer County, on Pennsylvania R. R	Princeton.
ennsville; village in Lower Penns Neck Township, Salem County	Wilmington.
enny Pot Stream; brook in Winslow Township, Camden County, and Hammonton and Buena Vista townships, Atlantic County, flows into Great Egg Harbor River	Hammonton.
ensauken; creek formed by North and South Branch, rising in Burlington County, flows northwest on boundary between Burlington and Camden counties into Delaware River.	Philadelphia. Mount Holly.
ensauken Station; village in Stockton Township, Camden County, on Pensylvania R. R., Amboy Division	Philadelphia.
enton; village in Mannington Township, Salem County, on West Jersey R. R	Salem.
enville; village in Mansfield Township, Warren County, on Musconetong River	Hackettstown
equannock; village in Pequannock Township, Morris County, on Pompton River and on New York and Greenwood Lake R. R	Morristown.
equannock; township in Morris County; area, 37 square miles.	Greenwood Lake. Morristown.
equannock; river heading in Hardiston Township, Sussex County, forms boundary between Passaic and Morris counties, and joins the Wanaque River at Pompton, and together they form the Pompton River.	Franklin. Greenwood Lake. Morristown.
equest; river heading in Greenwich Township, Sussex County, flowing southwest through Warren County into the Delaware River at Belvidere.	Wallpack. Hackettstown. Delaware Water Gap.
equest Furnace; village in Oxford Township, Warren County, on Pequest River, and on Delaware, Lackawanna and Western R. R., and Lehigh and Hudson River R. R	Hackettstown.

	Names of sheets.
Perch, cove projecting from Little Bay in Galloway Township, Atlantic County	Atlantic City.
Perch Cove Run; brook in Egg Harbor Township, Atlantic County, flowing into Great Egg Harbor River	Great Egg Harbor.
Perkintown; station in Oldman Township, Salem County, on Delaware River R. R	Salem.
Perkintown; village in Oldman Township, Salem County	Salem.
Perrineville; village in Millstone Township, Monmouth County	Cassville.
Perryville; village in Union Township, Hunterdon County	High Bridge.
Perth Amboy; city and township coextensive; Middlesex County, on Raritan Bay at mouth of Raritan River and at south end of Arthur Kill or Staten Island Sound	Plainfield.
Peru; village in Acquackanonck Township, Passaic County, on Paterson and Newark Branch of New York, Lake Erie and Western R. R	Paterson.
Pestletown; village in Waterford Township, Camden County	Hammonton.
Peters; brook in Bridgewater Township, Somerset County, tributary to Raritan River	Somerville.
Peters; creek in Haddon Township, Camden County, tributary to Newton Creek	Philadelphia.
Petersburg; village in Jefferson Township, Morris County	Franklin.
Petersburg; village in Upper Township, Cape May County	Great Egg Harbor.
Petersburg; village in Independence Township, Warren County	Hackettstown.
Petit; island in Manahawken Bay, in Stafford Township, Ocean County	Long Beach.
Petticoat; brook in Millville Township, Cumberland County, flowing into Maurice River	Bridgeton.
Pews; creek in Middletown Township, Monmouth County, flowing into Sandy Hook Bay	Sandy Hook.
Phalanx; village in Atlantic Township, Monmouth County	Sandy Hook.
Phillip; creek in Greenwich Township, Cumberland County, flowing into Stow Creek	Bayside.
Phillipsburg; city in Warren County, on Delaware River at western terminus of Morris Canal	Easton.
Piermont; village in Middle Township, Cape May County	Sea Isle.
Pier Point Neck; peninsula at south part of Fairfield Township, Cumberland County	Bayside.
Pierce Point; village on coast of Middle Township, Cape May County	Dennisville.
Pierson; creek in Newark City, Essex County, tributary to Maple Island Creek	Staten Island.
Pigeon; swamp in South Brunswick Township, Middlesex County	Princeton.
Pilesgrove; township in Salem County; area, 37 square miles	Salem.
Pimple; hills in Sparta Township, Sussex County	Franklin.
Pine; creek rising in Mullica Township, flows northeast, entering Egg Harbor City, Atlantic County, where it flows into Mullica River	Mullica.
Pine; brook tributary to Matchaponix Brook, in Marlboro and Manalapan townships, Monmouth County	New Brunswick.

	Names of s.
ook on boundary between Atlantic and Shrewsbury ships, Monmouth County, flows through Shrews- Township into Swimming River	Sandy Hook.
ook in Caldwell Township, Essex County, tributary ssaic River	Morristown.
amp in Sparta Township, Sussex County	Franklin.
amp in Montgomery Township, Sussex County	Port Jervis.
anch; brook in Landis Township, Cumberland ty, flowing into Blackwater Branch	Glassboro.
nch; village in Montville Township, Morris County, ssaic River	Morristown.
ok; village in Shrewsbury Township, Monmouth ty	Sandy Hook.
unt; creek in Greenwich Township, Cumberland ty, flowing into Cohansey Creek	Bayside.
ollow; village in Franklin Township, Gloucester ty	Hammonton.
ville; village in Andover Township, Sussex County.	Franklin.
rner; village in Medford Township, Burlington ty	Mount Holly.
ray; township in Middlesex County; area, 32 square	Plainfield. Somerville.
ray; village in Raritan Township, Middlesex County.	Plainfield.
rove; village in Mantua Township, Gloucester ty	Glassboro.
n; village in Franklin and Alexandria townships, erdon County	High Bridge.
e; township in Salem County; area, 50 square	Bridgeton. Glassboro.
; village in Upper Pittsgrove Township, Salem	Glassboro.
city in Union County	Plainfield.
borough in Montgomery Township, Somerset	Princeton.
village in Franklin Township, Gloucester County.	Glassboro.
village in Cranberry Township, Middlesex	Princeton.
n in Readington Township, Hunterdon County, uchburg Township, Somerset County, flows 1 Branch of Raritan River.	High Bridge. Somerville.
ve; village in Washington Township, Morris	Hackettstown.
e; village in Jackson Township, Ocean County.	Cassville.
e; village in Deerfield Township, Cumberland	Bridgeton.
; village in Washington Township, Burling- on Mullica River	Mullica.
; village in Passaic Township, Morris County, ok	Plainfield.
illage in Readington Township, Hunterdon leasant Run	High Bridge.
village in Washington Township, Warren	Delaware Water Gap.
village in Hillsboro Township, Somerset ladelphia and Reading R. R	Princeton.

	Names of sheets.
Pleasantdale; village in West Orange Township, Essex County	Morristown.
Pleasantville; village in Landis Township, Cumberland County	Glassboro.
Pleasantville; borough in Egg Harbor Township, Atlantic County, on West Jersey R. R.	Great Egg Harbor.
Pleasantville; village in Passaic Township, Morris County	Plainfield.
Pleasure; bay, an enlargement of Pleasure Bay River, in Eatontown Township, Monmouth County	Sandy Hook.
Pleasure Bay; river on boundary between Eatontown and Ocean townships, Monmouth County	Sandy Hook.
Pluckamin; village in Bridgewater Township, Somerset County	Somerville.
Plumbsock; village in Wantage Township, Sussex County, on Western Branch of Papakating Creek	Franklin.
Plumstead; township in Ocean County; area, 40 square miles.	Whitings. Cassville. Bordentown.
Pohatcong; township in Warren County; area, 15 square miles	Easton.
Pohatcong; creek in Independence, Mansfield, Washington, Franklin, Greenwich, and Pohatcong townships, Warren County, flowing into Delaware River.	Hackettstown. Delaware Water [illegible] Easton.
Pohatcong; mountain ridge extending from Washington Township, through center of Franklin Township into Greenwich Township, Warren County	Easton.
Point, The; village in Lebanon Township, Hunterdon County, on Musconetcong River	Hackettstown.
Point Airy; village in Pilesgrove Township, Salem County	Salem.
Point Airy; station in Pilesgrove Township, Salem County, on West Jersey R. R	Salem.
Point Pleasant; borough in Brick Township, Ocean County	Asbury Park.
Point Pleasant; village in Gloucester Township, Camden County	Philadelphia.
Pointville; village in New Hanover Township, Burlington County	Bordentown.
Pole Branch; brook in Woodland Township, Burlington County, tributary to Gates Branch of Wading River	Pemberton.
Pole Bridge; brook in Manchester Township, Ocean County, and Pemberton Township, Burlington County, tributary to Mount Misery Brook.	Whitings. Pemberton.
Pole Bridge Branch; brook in Weymouth Township, Atlantic County, flowing into Tuckahoe River	Tuckahoe.
Polhemus Branch; brook in Dover Township, Ocean County, tributary to Kettle Creek	Asbury Park.
Polipod; brook in Howell Township, Monmouth County, flowing into Hay Stack Brook	Asbury Park.
Polktown; village in Union Township, Hunterdon County	High Bridge.
Polkville; village in Knowlton Township, Warren County	Delaware Water G[illegible]
Pomona; village in Galloway Township, Atlantic County, on Camden and Atlantic R. R	Great Egg Harbo[illegible]
Pompeston; creek in Chester and Cinnaminson townships, *Burlington* County, flowing into Delaware River.	Burlington. Germantown. Mount Holly.

	Names of sheets.
Pompton; township in Passaic County; area, 53 square miles.	Greenwood Lake. Ramapo. Morristown.
Pompton; river formed by Wanaque and Pequannock rivers, which unite at Pompton. It forms boundary between Morris and Passaic counties, and flows into Passaic River at Two Bridges.	Franklin. Greenwood Lake. Morristown.
Pompton; lake in Pompton Township, Passaic County......	Greenwood Lake. Morristown.
Pompton; village in Pompton Township, Passaic County....	Morristown.
Pompton Junction; village in Pompton Township, Passaic County..	Greenwood Lake.
Pompton Plains; village in Pequannock Township, Morris County, on Pompton River and on New York and Greenwood Lake R. R..	Morristown.
Pond; creek in Lower Township, Cape May County, flowing into Delaware Bay..	Cape May.
Pond Run; village in Pond Run, in Hamilton Township, Mercer County..	Bordentown.
Pond Run; brook in Hamilton Township, Mercer County, flowing into Assanpink Creek..........................	Bordentown.
Pope; brook in Springfield Township, Union County, tributary to East Branch of Rahway River....................	Plainfield.
Popes Branch; brook tributary to Long Cripple, Woodland Township, Burlington County..............................	Whitings.
Pophandusing; brook in Oxford Township, Warren County, flowing into Delaware River at Belvidere................	Delaware Water Gap.
Poplar; village in Ocean Township, Monmouth County.....	Sandy Hook.
Poplar; hill in Raritan Township, Middlesex County; altitude, 235 feet..	Plainfield.
Popular; point projecting from Stafford Township, Ocean County, into Little Egg Harbor..............................	Long Beach.
Porch; branch of Mantua Creek, in Washington Township, Gloucester County.	Philadelphia. Glassboro.
Porchtown; village in Franklin Township, Gloucester County, near junction of Little Ease Run and Still Run, tributaries of Maurice River..............................	Glassboro.
Poricy; brook in Middletown Township, Monmouth County, flowing into Navesink River..............................	Sandy Hook.
Port Colden; village in Washington Township, Warren County, on Morris Canal and on Delaware, Lackawanna and Western R. R..	Hackettstown.
Port Elizabeth; village in Maurice River Township, Cumberland County, on West Jersey R. R..........................	Tuckahoe.
Port Mercer; village in West Windsor Township, Mercer County, on Delaware and Raritan Canal....................	Princeton.
Port Monmouth; village in Middletown Township, Monmouth County, on Sandy Hook Bay..............................	Sandy Hook.
Port Morris; village in Roxbury Township, Morris County, on Morris Canal and on Delaware, Lackawanna and Western R. R..	Lake Hopatcong.
Port Murray; village in Mansfield Township, Warren County, on Morris Canal and on Delaware, Lackawanna and Western R. R..	Hackettstown.

	Names of sheets.
Port Norris; village in Commercial Township, Cumberland County	Maurice Cove.
Port Oram; town in Randolph Township, Morris County, on Rockaway River and on Morris Canal	Lake Hopatcong.
Port Republic; village in Galloway Township, Atlantic County	Little Egg Harbor.
Port Warren; village in Lopatcong Township, Warren County, on Morris Canal and on Lopatcong Creek	Easton.
Portage; lake in Pompton Township, Passaic County, N. J., and Rockland County, N. Y.	Ramapo.
Post; creek in Lower Township, Cape May County	Cape May.
Post; island in swamp in Independence Township, Warren County	Hackettstown.
Post; brook in West Milford and Pompton townships, Passaic County, tributary to Wanaque River	Greenwood Lake.
Postville; village in West Milford Township, Passaic County.	Greenwood Lake.
Potter; creek in Berkeley Township, Ocean County, flowing into Barnegat Bay	Barnegat.
Potterstown; village in Readington Township, Hunterdon County	High Bridge.
Pottersville; village in Bedminster Township, Somerset County, on Lamington River	Somerville.
Poverty; beach on coast of Lower Township, Cape May County	Cape May.
Powell; creek in Egg Harbor Township, Atlantic County, flowing into Great Egg Harbor River	Great Egg Harbor.
Powerville; village in Boonton Township, Morris County, on Morris Canal and on Rockaway River	Morristown.
Prattsville; village in Delaware Township, Hunterdon County, on Wickecheoke Creek	Lambertville.
Preakness; village in Wayne Township, Passaic County, on Preakness Brook	Paterson.
Preakness; brook in Wayne Township, Passaic County, tributary to Pompton River.	Paterson. Morristown.
Preakness; mountain, a division of the Second Watchung Mountain, in Wayne Township, Passaic County	Paterson.
Prescott; brook in Clinton Township, Hunterdon County, tributary to South Branch of Raritan River	High Bridge.
Price Branch; brook in Waterford Township, Camden County.	Hammonton.
Primrose; brook in Passaic Township, Morris County, tributary to Passaic River.	Somerville. Lake Hopatcong.
Princeton; township in Mercer County; area, 18 square miles.	Princeton.
Princeton; borough in Princeton Township, Mercer County, on Pennsylvania R. R	Princeton.
Princeton Junction; village in West Windsor Township, Mercer County, at junction of Princeton Branch of Pennsylvania R. R	Princeton.
Princesville; village in Lawrence Township, Mercer County.	Princeton.
Prospect; village in Logan Township, Gloucester County, on Delaware River R. R	Chester.
Prospect Plains; village in Cranbury Township, Middlesex County, on Camden and Amboy R. R., Pennsylvania R. R.	New Brunswick.
Prospertown; village in Upper Freehold Township, Monmouth County, on Lahaway Creek	Cassville.

	Names of sheets.
Prossers Mills; village in Gloucester Township, Camden County, on South Branch of Timber Creek	Philadelphia.
Pullen; island in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Pump Branch; brook in Winslow and Waterford townships, Camden County, tributary to Albertson Brook	Hammonton.
Pursey; brook tributary to Repaupo Creek, in Greenwich Township, Gloucester County	Chester.
Quaker; village in Washington Township, Burlington County, on Batsto River	Mullica.
Quakertown; village in Franklin Township, Hunterdon County	High Bridge.
Quick; pond in Stillwater Township, Sussex County, extending into Hampton Township, Sussex County	Wallpack.
Quinton; township in Salem County; area, 25 square miles	Bayside. Salem.
Quinton; town in Quinton Township, Salem County	Salem.
Raccoon; creek flowing through Gloucester County into Delaware River	Chester.
Raccoon; creek in Harrison and Woolwich townships, Gloucester County, flowing into Delaware River	Salem.
Raccoon; island in Delaware River off coast of Logan Township, Gloucester County	Chester.
Raccoon; island off western coast of Jefferson Township, Morris County, and eastern coast of Byram Township, Sussex County, in Lake Hopatcong	Lake Hopatcong.
Race; canal in Randolph Township, Burlington County, connects Oswego River, or East Branch of Wading River, with West Branch of Wading River	Mullica.
Radix; village in Monroe Township, Gloucester County, on Philadelphia and Reading R. R	Hammonton.
Rahway; city in Union County, on Rahway River and on Pennsylvania R. R	Plainfield.
Rahway; river heading in West Orange Township, Essex County, flows through Union County into Arthur Kill, south of Linden Township.	Staten Island. Plainfield. Morristown.
Rahway, East Branch of; river in Essex and Union counties, tributary to Rahway River.	Plainfield. Morristown.
Rahway, South Branch of; river rising in Middlesex County, flows into Rahway River in Rahway City, Union County.	Plainfield.
Rail Swamp Branch; brook in Burlington and Ocean counties, flowing into Westecunk Creek	Little Egg Harbor.
Rainbow; group of islands in Great Egg Harbor, in Upper Township, Cape May County	Great Egg Harbor.
Rainbow Thorofare; passage in Rainbow Islands, in Upper Township, Cape May County	Great Egg Harbor.
Ramapo; mountain range in Bergen and Passaic counties, and extending into New York.	Greenwood Lake. Ramapo.
Ramapo; river rising in Orange County, N. Y., flowing through Bergen, Passaic, and Wayne counties, N. J., into Pompton River.	Ramapo. Greenwood Lake. Morristown.
Rambo; station on Delaware River R. R., in Greenwich Township, Gloucester County	Chester.
Ramsey; village in Hohokus Township, Bergen County, on New York, Lake Erie and Western R. R	Ramapo.

	Names of sheets.
Ramseyburg; village in Knowlton Township, Warren County, on Delaware River and on Delaware, Lackawanna and Western R. R	Delaware Water Gap
Rancocas; village in West Hampton and Willingboro townships, Burlington County	Burlington.
Rancocas; creek heading in two branches, the North Branch and the South Branch, flowing northwest across Burlington County into Delaware River.	Whitings. Mount Holly. Pemberton. Burlington.
Randell; village in Harrington Township, Bergen County, on West Shore R. R	Harlem.
Randolph; township in Burlington County; area, 62 square miles.	Pemberton. Whitings. Little Egg Harbor. Mullica.
Randolph; township in Morris County; area, 28 square miles.	Lake Hopatcong.
Raritan; township in Monmouth County; area, 9 square miles	Sandy Hook.
Raritan; township in Middlesex County; area, 36 square miles.	Plainfield. New Brunswick.
Raritan; township in Hunterdon County; area, 40 square miles.	High Bridge. Lambertville.
Raritan; borough in Bridgewater Township, Somerset County, on Raritan River and on Central R. R. of New Jersey	Somerville
Raritan; bay between Staten Island and mainland of New Jersey	Sandy Hook.
Raritan; river formed by two branches, the North and South branches, in Morris, Somerset, and Middlesex counties, flowing into Raritan Bay.	Lake Hopatcong. Hackettstown. High Bridge. Somerville. Plainfield. New Brunswick.
Raven Rock; village in Delaware Township, Hunterdon County, on Delaware River and on Belvidere Division, Pennsylvania R. R	Doylestown.
Readingsburg; village in High Bridge Township, Hunterdon County, on South Branch of Raritan River, and on High Bridge Branch of Central R. R. of New Jersey	High Bridge.
Readington; township in Hunterdon County; area, 49 square miles.	High Bridge. Somerville.
Readington; village in Readington Township, Hunterdon County, on Hollands Brook	Somerville.
Reaville; village in East Amwell and Raritan townships, Hunterdon County	Lambertville.
Recklesstown; village in Chesterfield Township, Burlington County	Bordentown.
Red; hill in Chesterfield Township, Burlington County; elevation, 234 feet	Bordentown.
Red Bank; town in Shrewsbury Township, Monmouth County, at junction of New York and Long Branch R. R., and Atlantic Highlands Branch of New Jersey Southern R. R	Sandy Hook.
Red Bank; village in West Deptford Township, Gloucester County, on Delaware River	Philadelphia.

	Names of sheets.
Red Lion; village in Southampton Township, Burlington County	Pemberton.
Red Oak Grove; village in Lacey Township, Ocean County.	Whitings.
Red Tavern; village in Monroe Township, Middlesex County.	New Brunswick.
Red Valley; village in Upper Freehold Township, Monmouth County	Cassville.
Reding; pond in Andover Township, Sussex County	Wallpack.
Reed; island in Little Egg Harbor, in Stafford Township, Ocean County	Long Beach.
Reed; bay in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Reeves; village in Medford Township, Burlington County, on Medford Branch R. R	Mount Holly.
Repaupo; village in Woolwich Township, Gloucester County.	Chester.
Repaupo; creek on boundary between Greenwich Township on the east and Logan and Woolwich townships on the west, Gloucester County	Chester.
Retreat; village in Southampton Township, Burlington County	Pemberton.
Rhode Hall; village in South Brunswick Township, Middlesex County	New Brunswick.
Richardson; channel connecting Richardson Sound, in Middle Township, with Turtle Gut Inlet in Lower Township, Cape May County.	Cape May. Dennisville.
Richardson; sound in Middle Township, Cape May County.	Dennisville.
Richfield; village in Acquackanonck Township, Passaic County, on Morris Canal	Paterson.
Richland; village in Buena Vista Township, Atlantic County.	Tuckahoe.
Richmanville; village in Pilesgrove Township, Salem County, on Salem coast	Salem.
Riddleton; village in Upper Alloways Creek Township, Salem County, on West Jersey R. R	Salem.
Ridgefield; township in Bergen County; area, 19 square miles.	Harlem. Paterson.
Ridgefield; village in Ridgefield Township, Bergen County, on Northern R. R. of New Jersey	Paterson.
Ridgefield Park; village in Ridgefield Township, Bergen County, on Hackensack River	Paterson.
Ridgeway; station in Manchester Township, Ocean County, on New Jersey Southern R. R	Cassville.
Ridgeway Branch; brook in Jackson and Manchester townships, Ocean County, tributary to Union Branch of Toms River	Cassville.
Ridgewood; township in Bergen County; area, 7 square miles.	Paterson. Ramapo.
Ridgewood; town in Ridgewood Township, Bergen County, on New York, Lake Erie and Western R. R	Paterson.
Riggan; ditch in Maurice River Township, Cumberland County, flowing into Delaware Bay	Dennisville.
Ringoes; village in East Amwell Township, Hunterdon County	Lambertville.
Ringwood; village in Pompton Township, Passaic County, on Ringwood Creek and on Ringwood Branch of New York and Greenwood Lake R. R	Greenwood Lake.

	Names of sheets.
Ringwood; creek heading in Orange County, N. Y., and flowing into Wanaque River in Pompton Township, Passaic County	Greenwood Lake.
Rio Grande; village in Middle Township, Cape May County, on West Jersey R. R	Dennisville.
Risley; channel in coast swamp in Egg Harbor Township, Atlantic County, flowing into Great Egg Harbor	Great Egg Harbor.
Risley Branch; brook in Woodland Township, Burlington County, tributary to Governors Hill Brook	Pemberton.
Risleyville; village in Egg Harbor Township, Atlantic County	Great Egg Harbor.
River Edge; village in Midland Township, Bergen County, on Hackensack River and on New Jersey and New York R. R	Paterson.
Riverside; village, part of Newark City, Essex County, on Passaic River and on Paterson and Newark Branch of New York, Lake Erie and Western R. R	Paterson.
Riverside; town in Delran Township, Burlington County, on Delaware River and on Amboy Division Pennsylvania R. R.	Burlington.
Riverton; town in Cinnaminson Township, Burlington County, on Pennsylvania R. R., Amboy Division	Germantown.
Rivervale; village in Washington Township, Bergen County, on Hackensack River	Ramapo.
Roadstown; village in Hopewell Township, Cumberland County	Bayside.
Roaring; brook rising in Hillsboro Township, Somerset County, flowing into Crusers Brook in Montgomery Township	Princeton.
Robanna; village in Monroe Township, Gloucester County, on Philadelphia and Reading R. R.	Glassboro.
Robbinsville; village in Washington Township, Mercer County, on Pennsylvania R. R., Amboy Division	Bordentown.
Roberts Branch; brook in Woodland and Shamong townships, Burlington County, tributary to Batsto River.	Pemberton. Mullica.
Robertsville; village in Marlboro Township, Monmouth County	New Brunswick.
Robinson; beach on coast of Maurice River Township, Cumberland County	Dennisville.
Robinson; branch of Rahway River in Union County, flowing into that river at Rahway City	Plainfield.
Robinvale; village in Raritan Township, Middlesex County, on Pennsylvania R. R.	Plainfield.
Rochelle Park; village in Saddle River Township, Bergen County, on Saddle River and on New York, Susquehanna and Western R. R.	Paterson.
Rock; brook in Hillsboro and Montgomery townships, Somerset County, tributary to Bedens Brook.	Princeton. Lambertville.
Rock; point projecting into Great Egg Harbor, Weymouth Township, Atlantic County	Great Egg Harbor.
Rock Mill; village in Hillsboro Township, Somerset County.	Princeton.
Rockaway; township in Morris County; area, 63 square miles	Greenwood Lake. Morristown. Lake Hopatcong.

	Names of sheets.
Rockaway; river in Morris County, flowing into Passaic River.	Franklin. Morristown. Lake Hopatcong.
Rockaway; creek in Hunterdon County, formed by two branches, the North Branch and the South Branch, tributary to Lamington River.	High Bridge. Somerville.
Rockaway; village in Rockaway Township, Morris County, on Rockaway River and on Morris Canal	Lake Hopatcong.
Rockaway Valley; village in Rockaway Township, Morris County, on Rockaway River	Morristown.
Rockport; village in Wantage Township, Sussex County	Port Jervis.
Rockport; village in Mansfield Township, Warren County, on Morris Canal	Hackettstown.
Rocktown; village in East Amwell Township, Hunterdon County	Lambertville.
Rockwood; village in Hammonton Township, Atlantic County	Mullica.
Rocky; brook rising in Millstone Township, Monmouth County, flowing northwest on boundary between Monroe Township, Middlesex County, and East Windsor Township, Mercer County, into Millstone River.	Cassville. New Brunswick.
Rocky Hill; borough in Montgomery Township, Somerset County, on Millstone River and on Delaware and Raritan Canal	Princeton.
Roe; pond in Vernon Township, Sussex County	Franklin.
Roe; island in swamp in Independence Township, Warren County	Hackettstown.
Rosedale; village in Lawrence Township, Mercer County, on Stony Brook	Princeton.
Roseland; village in Livingston Township, Essex County	Morristown.
Roselle; town in Linden Township, Union County, at junction of Lehigh Valley R. R. with Central R. R. of New Jersey.	Plainfield.
Rosemont; village in Delaware Township, Hunterdon County.	Lambertville.
Rosenhayn; village in Deerfield Township, Cumberland County, on New Jersey Southern R. R	Bridgeton.
Roseville; village, part of Newark City, Essex County, on Morris Canal and on Bloomfield Branch of Delaware, Lackawanna and Western R. R	Paterson.
Roseville; village in Byram Township, Sussex County, on Lubbers Run	Lake Hopatcong.
Rotten; pond in Franklin Township, Bergen County	Greenwood Lake.
Round; mountain in Readington Township, Hunterdon County; altitude, 608 feet	High Bridge.
Round; valley in Clinton Township, Hunterdon County	High Bridge.
Round; pond in Wallpack Township, Sussex County	Wallpack.
Roundabout; creek in Little Egg Harbor Township, Burlington County, flowing into Great Bay	Little Egg Harbor.
Rowlands Mills; village in Readington Township, Hunterdon County, on South Branch of Raritan River and on Lehigh Valley R. R	High Bridge.
Roxbury; township in Morris County; area, 24 square miles.	Lake Hopatcong.
Roxbury; village in Harmony Township, Warren County, on Buckhorn Creek	Delaware Water Gap.
Roxiticus; village in Mendham Township, Morris County, on North Branch of Raritan River	Lake Hopatcong.

	Names of sheets.
Roycefield; village in Hillsboro Township, Somerset County, on South Branch of Central R. R. of New Jersey	Somerville.
Royces Branch; river in Hillsboro Township, Somerset County, tributary to Millstone River.	Somerville. Princeton.
Rudeville; village in Hardyston Township, Sussex County	Franklin.
Rulons; village in Woolwich Township, Gloucester County, on West Jersey R. R	Chester.
Rum; point projecting from Atlantic Ocean into Absecon Inlet, in Galloway Township, Atlantic County	Atlantic City.
Rumson; neck of land in Shrewsbury Township, Monmouth County, between Navesink and Shrewsbury rivers	Sandy Hook.
Run Creek; passage in coast swamp in Upper Township, Cape May County	Sea Isle.
Russia; village in Jefferson Township, Morris County	Franklin.
Rutherford; borough in Bergen County, formerly in Union Township, on Passaic River	Paterson.
Saddle; river heading in Rockland County, N. Y., flows through Bergen County, N. J., into Passaic River at Garfield.	Ramapo. Paterson.
Saddle River; township in Bergen County; area, 15 square miles	Paterson.
Saddle River; village in Orvil Township, Bergen County, on Saddle River	Ramapo.
Saint Cloud; village in West Orange Township, Essex County	Morristown.
Salem; county in southwest part of the State; area, 389 square miles.	Wilmington. Smyrna. Chester. Salem. Bayside. Glassboro. Bridgeton.
Salem; city in Salem County	Salem.
Salem; village in Union Township, Union County, on Elizabeth River	Staten Island.
Salem; creek rising in Upper Pittsgrove Township, Salem County, flows through Salem County into Delaware River.	Salem. Glassboro.
Salt; island in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Samptown; village in Piscataway Township, Middlesex County, on Bound Brook and on Lehigh Valley R. R	Plainfield.
Sand; pond in Wantage Township, Sussex County	Port Jervis.
Sand; pond in Vernon Township, Sussex County	Franklin.
Sand; pond in Hardwick Township, Warren County	Wallpack.
Sand Brook; village in Delaware Township, Hunterdon County	Lambertville.
Sand Hills; village in South Brunswick Township, Middlesex County	Princeton.
Sand Hills; village in Raritan Township, Middlesex County.	Plainfield.
Sand Hills; village in Vernon Township, Sussex County	Franklin.
Sandtown; village in Southampton Township, Burlington County, on Little Creek	Mount Holly.
Sandy; island in Union Township, Ocean County, in Barnegat Bay	Long Beach.

	Names of sheets.
Sandy; ridge in marsh in Shamong Township, Burlington County	Pemberton.
Sandy Hook; bay west of Sandy Hook	Sandy Hook.
Sandy Hook; northern point of reef on coast of New Jersey.	Sandy Hook.
Sandy Hook; life-saving station on Sandy Hook	Sandy Hook.
Sandy Hook; pier on west side of Sandy Hook	Sandy Hook.
Sandy Hook; light on west side of Sandy Hook	Sandy Hook.
Sandyston; township in Sussex County; area, 43 square miles.	Milford, Wallpack. Franklin.
Sarah Run; brook in Stow Creek Township, Cumberland County, flowing into Horse Run	Bayside.
Sarepta; village in Oxford Township, Warren County, on Beaver Brook	Delaware Water Gap.
Savage; pond in Dennis Township, Cape May County	Dennisville.
Saw Mill; creek on boundary between Union Township, Bergen County, and Kearney Township, Hudson County, tributary to Hackensack River	Paterson.
Saxton Falls; village in Allamuchy Township, Warren County, on Morris Canal and on Musconetcong River	Hackettstown.
Sayres Neck; peninsula of dry land in coast swamp in Lawrence Township, Cumberland County	Bridgeton.
Sayreville; township in Middlesex County; area, 17 square miles	New Brunswick.
Sayreville; village in Sayreville Township, Middlesex County, on Raritan River	New Brunswick.
Schooleys Mountain; village in Washington Township, Morris County	Hackettstown.
Schooner; creek in Upper Township, Cape May County, flowing into Tuckahoe River	Great Egg Harbor.
Schuetzen Park; village in North Bergen Township, Hudson County, on Northern R. R. of New Jersey and on New York, Susquehanna and Western R. R	Paterson.
Schuyler Corner; village in Union Township, Bergen County.	Paterson.
Schraalenburg; village in Palisade Township, Bergen County, on West Shore R. R	Harlem.
Scobeyville; village in Atlantic Township, Monmouth County	Sandy Hook.
Scotch Bonnet; passage in coast swamp in Middle Township, Cape May County	Dennisville.
Scotch Plains; village in Fanwood Township, Union County, on Green Brook	Plainfield.
Scotland Run; brook running southwest through Gloucester County into Maurice River	Glassboro.
Scott; mountain in Warren County; is a part of South Mountain.	Easton. Delaware Water Gap.
Scott Corner; village in South Brunswick Township, Middlesex County	Princeton.
Scull; landing in Egg Harbor Township, Atlantic County, on Egg Harbor River	Great Egg Harbor.
Scull; bay in coast swamp in Egg Harbor Township, Atlantic County	Great Egg Harbor.
Sea Breeze; village on coast of Fairfield Township, Cumberland County	Bayside.

	Names of sheets.
Sea Girt; village in Wall Township, Monmouth County, on New York and Long Branch R. R.	Asbury Park.
Sea Girt; inlet, extending from Atlantic Ocean into Wall Township, Monmouth County	Asbury Park.
Sea Haven; village on coast of Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Sea Isle City; borough on coast of Cape May County	Sea Isle.
Sea Isle City; life-saving station on northeast coast of Dennis Township, Cape May County	Sea Isle.
Sea Isle Junction; village in northern part of Dennis Township, Cape May County	Dennisville.
Sea Plain; village in Wall Township, Monmouth County, on New York and Long Branch R. R.	Asbury Park.
Seabright; village in Shrewsbury Township, Monmouth County	Sandy Hook.
Seabright; life-saving station on reef in Shrewsbury Township, Monmouth County	Sandy Hook.
Seaside Park; village on reef in Berkeley Township, Ocean County, on Philadelphia and Long Branch R. R.	Barnegat.
Seaview; village in southern part of Egg Harbor Township, Atlantic County	Great Egg Harbor
Seaville; village in southeast part Upper Township, Cape May County	Sea Isle.
Seaweed; point projecting from Metedeconk Neck into Barnegat Bay, in Brick Township, Ocean County	Asbury Park.
Secaucus; village in central part North Bergen Township, Hudson County	Paterson.
Second; river in eastern part Essex County, flows into Passaic River	Paterson.
Second Branch; brook in Mullica Township, Atlantic County	Mullica.
Second Watchung; mountain ridge extending parallel with First Watchung Mountain through Passaic, Essex, Union, and Somerset counties.	Paterson. Morristown. Somerset. Plainfield.
Sedge; group of islands in Barnegat Bay, in Ocean Township, Ocean County	Barnegat.
Sergeantsville; village in central part Delaware Township, Hunterdon County	Lambertville.
Seven; group of islands in Great Bay, in Little Egg Harbor Township, Burlington County	Little Egg Harbor
Seven Mile; beach along southeast shore of Middle Township, Cape May County.	Sea Isle. Dennisville.
Seven Stars; village in Brick Township, Ocean County	Asbury Park.
Sewaren; village in Woodbridge Township, Middlesex County, on Arthur Kill and on New York and Long Branch R. R.	Plainfield.
Sewell; village in Mantua Township, Gloucester County, on West Jersey R. R	Philadelphia.
Sewell; point extending from southeast part of Lower Township, Cape May County, into Atlantic Ocean	Cape May.
Shabakunk; creek in Mercer County	Lambertville. Princeton.
Shad; island in Little Bay, Galloway Township, Atlantic County	Atlantic City.
Shady Side; village in southeastern part Ridgefield Township, Bergen County, on Hudson River	Harlem.

	Names of sheets.
Shamong; township in Burlington County; area, 70 square miles.	Pemberton. Hammonton. Mount Holly. Mullica.
Shane Branch; brook in Burlington County	Pemberton.
Shannoc; brook in Jackson Township, Ocean County	Cassville.
Shark River; village in Neptune Township, Monmouth County, on Shark River	Asbury Park.
Shark River; village in Wall Township, Monmouth County, on New Jersey Southern R. R	Asbury Park.
Shark River; inlet extending from Atlantic Ocean into Monmouth County	Asbury Park.
Shark River; life-saving station on coast of Neptune Township, Monmouth County	Asbury Park.
Sharon; village in Upper Freehold Township, Monmouth County	Bordentown.
Sharp Branch; brook in east part of Maurice River Township, Cumberland County; flows east into Tuckahoe River	Tuckahoe.
Sharp Rook; an indentation of Lake Hopatcong into the eastern coast of Byram Township, Sussex County	Lake Hopatcong.
Sharp Run; brook in Evesham and Medford townships, Burlington County	Mount Holly
Sharptown; village in Pilesgrove Township, Salem County.	Salem.
Shaw Branch; brook in Hopewell Township, Cumberland County.	Bayside, Bridgeton.
Sheepshead; passage in coast swamp in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Shell; landing in Middle Township, Cape May County	Dennisville.
Shelter; island in Little Egg Harbor, in Eagleswood Township, Ocean County	Little Egg Harbor.
Shelter Islands; bay in coast swamp in Egg Harbor Township, Atlantic County	Great Egg Harber.
Sheppard; pond in northeastern part of Pompton Township, Passaic County, N. J., extending into Rockland County, N. Y.	Ramapo.
Sheppard Mill; village in Greenwich Township, Cumberland County, on New Jersey Southern R. R	Bayside.
Shiloh; village in Stowe Creek Township, Cumberland County.	Bayside
Shiloh; village in eastern part of Hope Township, and partly in Frelinghuysen Township, Warren County	Hackettstown.
Shinn Branch; brook in Woodland Township, Burlington County	Pemberton.
Shipetaukin; creek in Lawrence Township, Mercer County.	Princeton.
Shippenport; village in northwestern part of Roxbury Township, Morris County, on Morris Canal and on Delaware, Lackawanna and Western R. R	Lake Hopatcong.
Ships Bottom; life-saving station on coast of Stafford Township, Ocean County	Long Beach.
Shirley; village in Upper Pittsgrove Township, Salem County	Glassboro.
Shoal Branch: brook in Woodland and Randolph townships, Burlington County.	Whitings. Pemberton. Mullica.

	Names of sheets.
Shongum; village in eastern part Randolph Township, Morris County	Lake Hopatcong.
Shooting Thorofare; passage in coast swamp in Little Harbor Township, Burlington County	Little Egg Harbor.
Shord Mill; brook in Little Egg Harbor Township, Burlington County, tributary to Turkerton Creek	Little Egg Harbor.
Short Hills; village in Millburn Township, Essex County, on Delaware, Lackawanna and Western R. R	Plainfield.
Shreve Branch; brook in Woodland Township, Burlington County, tributary to Shoal Branch	Whitings.
Shrewsbury; township in Monmouth County; area, 33 square miles.	Sandy Hook. Asbury Park.
Shrewsbury; village in Shrewsbury Township, Monmouth County, on New Jersey Southern R. R	Sandy Hook.
Shrewsbury; river in Monmouth County, flows into Sandy Hook Bay	Sandy Hook.
Shuster; pond in eastern part Hardwick Township, Warren County	Wallpack.
Sicklerville; village in Winslow Township, Camden County, on Philadelphia and Reading R. R	Hammonton
Sicomac; village in southern part of Franklin Township, Bergen County	Paterson.
Sidney; village in northern part Franklin Township, Hunterdon County	High Bridge.
Signey; run in Gloucester Township, Camden County	Philadelphia.
Siloam; village in Freehold Township, Monmouth County	Cassville.
Silver; lake in northeastern part of Hope Township, Warren County	Hackettstown.
Silver Lake; village in Belleville Township, Essex County, Morris Canal	Paterson.
Silver Run; brook in Millville Township, Cumberland County; flows into Maurice River	Bridgeton.
Silverton; village in Dover Township, Ocean County	Asbury Park.
Simkin Thorofare; passage in coast swamp in Galloway Township, Atlantic County	Atlantic City
Simonson; brook in Franklin Township, Somerset County; flows into Millstone River at Griggstown	Princeton.
Singac; village in western part of Little Falls Township, Passaic County, on Passaic River and on New York and Greenwood Lake R. R	Paterson
Six Mile Run; river rising in North Brunswick Township, Middlesex County; flows west and empties into Millstone River in Franklin Township, Somerset County.	Somerset. New Brunswick
Six Points; village in Pittsgrove Township, Salem County	Glassboro
Skillman; village in western part Montgomery Township, Somerset County, on Philadelphia and Reading R. R	Princeton.
Skit Branch; brook in Shamong Township, Burlington County	Pemberton.
Skunk; sound in southern part of Lower Township, Cape May County	Cape May.
Slab Branch; small brook in Maurice River Township, Cumberland County, tributary to Muskee Creek	Tuckahoe.
Slab Causeway Branch; brook in Woodland Township, Burlington County, tributary to Burrs Mill Brook	Pemberton.

	Names of sheets.
creek in southeastern part Weymouth Township, tic County, flows north into Middle River	Great Egg Harbor.
point projecting from Metedeconk Neck, in Brick ship, Ocean County, in Barnegat Bay	Asbury Park.
dge; island in Barnegat Bay in Union Township, County	Long Beach
orofare; passage in coast swamp in Galloway Town- Atlantic County	Atlantic County.
brook in Livingston Township, Essex County, tribu- o Passaic River	Morristown.
reek rising in northeastern part Middle Township, May County, flowing northwest into Dennis Creek	Dennisville.
illage in Shamong Township, Burlington County	Mount Holly.
anding in Egg Harbor Township, Atlantic County, ke Bay	Great Egg Harbor.
reek in Woodbridge Township, Middlesex County, ary to Arthur Kill.	Staten Island. Plainfield.
ferry on southwest coast of Wallpack Township, x County, on Delaware River	Wallpack.
lls; village in southeastern part of West Milford ship in Passaic County, on Pequannock River, and w York, Susquehanna and Western R. R	Greenwood Lake.
g; village in Freehold Township, Monmouth y	Cassville.
le; village in Easthampton Township, Burlington y, on Rancocas Creek.	Pemberton. Mount Holly.
le; village in Galloway Township, Atlantic County.	Atlantic City.
ill in southwestern part of North Bergen Township, n County; altitude, 203 feet	Paterson.
ll; village in eastern part Center Township, Camden y	Philadelphia.
wn; village in southwestern part of East Amwell ship, Hunterdon County	Lambertville.
rofare; passage in coast swamp in Egg Harbor ship, Atlantic County	Great Egg Harbor.
llage in Belleville Township, Essex County, on Se- River and on New York and Greenwood Lake R. R.	Paterson.
oint; borough in Egg Harbor Township, Atlantic y	Great Egg Harbor.
cove projecting from Reed Bay in Galloway Town- Atlantic County	Atlantic City.
; county in central part of State; area, 305 square	High Bridge. Lambertville. Princeton. Somerville. Plainfield. New Brunswick.
; village in western part Ewing Township, Mercer ty, on Delaware River, on Delaware and Raritan , and on Belvidere Division Pennsylvania R. R.	Lambertville.
le; village in central part of Galloway Township, tic County	Atlantic City.
le; borough in southern part of Bridgewater Town- Somerset County, on Raritan River, at junction of Branch R. R. with Central R. R. of New Jersey	Somerville.

	Names of sheets.
Somerville Station; village in Gloucester Township, Camden County, on Philadelphia and Reading R. R. (Atlantic City Line)	Philadelphia.
Sooy Place; village in Woodland Township, Burlington County	Pemberton.
South; hill in Shrewsbury Township, Monmouth County; elevation, 161 feet	Sandy Hook.
South; river rising in northern part of Buena Vista Township; flows southeast through Hamilton Township, forming partial boundary between it and Weymouth Township, into Great Egg Harbor River, Atlantic County	Great Egg Harbor.
South; branch of Rahway River, in Middlesex County, and enters that river at Rahway City	Plainfield.
South; river forming boundary between Sayreville and East Brunswick townships, Middlesex County; flows into Raritan River	New Brunswick.
South; beacon on Sandy Hook	Sandy Hook.
South Amboy; township in Middlesex County; area, 1 square mile	New Brunswick.
South Amboy; village in Sayreville Township, Middlesex County, on Camden and Amboy R. R., and on New York and Long Branch R. R	New Brunswick.
South Atlantic City; borough on coast of Egg Harbor Township, Atlantic County	Atlantic City.
South Branch; village in northwestern part Hillsboro Township, Somerset County, on South Branch of Raritan River	Somerville.
South Branch; brook in Woodland Township, Burlington County, tributary to Burrs Mill Brook	Pemberton,
South Branch; brook in South Harrison and Harrison townships, Gloucester County, tributary to Raccoon Creek.	Glassboro. Salem.
South Brigantine; life-saving station on Brigantine Beach	Atlantic City.
South Brunswick; township in Middlesex County; area, 49 square miles.	Princeton. New Brunswick.
South Channel; passage in coast swamp in Middle Township, Cape May County	Sea Isle.
South Dennisville; village in southern central part Dennis Township, Cape May County	Dennisville.
South Harrison; township in Gloucester County; area, 20 square miles	Glassboro. Salem.
South Orange; township in Essex County; area, 8 square miles.	Morristown. Plainfield. Paterson. Staten Island.
South Orange; borough in central part South Orange Township, Essex County, on Delaware, Lackawanna and Western R. R	Plainfield.
South Plainfield; village in northeastern part of Piscataway Township, Middlesex County, on Bound Brook and on Lehigh Valley R. R	Plainfield.
South Run; brook in New Hanover, Burlington County, and Plumstead Township, Ocean County, tributary to Crosswick Creek.	Bordentown. Cassville.

	Names of sheets.
South Seaville; village in eastern part of Dennis Township, Cape May County	Dennisville.
South Somerville; village in northern part Hillsboro Township, Somerset County, on Lehigh Valley R. R	Somerville.
South Vineland; village in Landis Township, Cumberland County, on West Jersey R. R	Bridgeton.
Southampton; township in Burlington County; area, 47 square miles.	Pemberton. Mount Holly.
Southtown; village in southern part of Frelinghuysen Township, Warren County	Hackettstown.
Sow and Pigs; creek in Downe Township, Cumberland County, flows into Delaware River	Bridgeton.
Spa Spring; village in Perth Amboy Township, Middlesex County	Plainfield.
Sparta; township in Sussex County; area, 42 square miles.	Franklin. Lake Hopatcong.
Sparta; village in central part of Sparta Township, Sussex County	Franklin.
Sparta; mountain in Byram Township, Sussex County	Lake Hopatcong.
Sparta Junction; village in western part of Sparta Township, Sussex County	Franklin.
Sparta Station; village in northwestern part Sparta Township, on Sussex R. R., Sussex County	Franklin.
Speedwell; village in Woodland Township, Burlington County	Pemberton.
Spermaceti; cove in west shore Sandy Hook	Sandy Hook.
Spermaceti Cove, life-saving station on Sandy Hook	Sandy Hook.
Spicertown; village in southwestern part of Rockaway Township, Morris County	Lake Hopatcong.
Splitrock; village in eastern part of Rockaway Township, Morris County	Morristown.
Splitrock; pond in the northeastern part of Rockaway Township, Morris County	Morristown.
Spotswood; village in East Brunswick Township, Middlesex County, on Camden and Amboy R. R	New Brunswick.
Spraguetown; village in Eagleswood Township, Ocean County, on Westecunk Creek	Little Egg Harbor.
Spring; lake in Wall Township, Monmouth County	Asbury Park.
Spring Hill; group of four hills in Woodland and Randolph townships, Burlington County; elevation, 168, 168, 174, and 176 feet, respectively	Whitings.
Spring Lake; village in Wall Township, Monmouth County.	Asbury Park.
Spring Lake; life-saving station on coast of Wall Township, Monmouth County	Asbury Park.
Spring Mills; village in Gloucester Township, Camden County	Philadelphia.
Spring Mills; village in central part of Holland Township, Hunterdon County	Easton.
Spring Valley; village in central part of Midland Township, Bergen County	Paterson.
Springdale; village in Delaware Township, Camden County, on Philadelphia, Marlton and Medford R. R	Mount Holly.
Springdale; village in western part of Andover Township, Sussex County, on Pequest River	Wallpack River.
Springer; creek in Shamong Township, Burlington County, flows into Batsto River.	Mullica. Mount Holly. Pemberton.

	Names of sheets.
Springfield; township in Union County; area, 5 square miles.	Plainfield.
Springfield; township in Burlington County; area, 30 square miles.	Bordentown. Burlington. Pemberton.
Springfield; village in Springfield Township, Burlington County	Bordentown.
Springfield; town coextensive with Springfield Township, Union County	Plainfield.
Springtown; village in Greenwich Township, Cumberland County	Bayside.
Springtown; village in central part of Washington Township, Morris County	Hackettstown.
Springtown; village in central part of Pohatcong Township, Warren County	Easton.
Sprout; brook in Midland Township, Bergen County, tributary to Saddle River	Paterson.
Spruce Run; brook rising in northern part of Lebanon Township, Hunterdon County, enters South Branch of Raritan River at Clinton	High Bridge.
Squan Beach; life-saving station on coast of Wall Township, Monmouth County	Asbury Park.
Squankum; village in Howell Township, Monmouth County.	Asbury Park.
Squankum; brook in Howell Township, Monmouth County, flows into Manasquan River	Asbury Park.
Squankum Branch; brook in Monroe Township, Gloucester County, flows into Great Egg Harbor River	Hammonton.
Stafford; township in Ocean County; area, 56 square miles.	Whitings. Little Egg Harbor. Long Beach.
Stafford Forge; village in Eagleswood Township, Ocean County	Little Egg Harbor
Staffordville; village in Eagleswood Township, Ocean County, on Tuckerton R. R	Little Egg Harbor
Stag; pond in northern part of Byram Township, Sussex County	Lake Hopatcong.
Stanhope; village in southern part of Byram Township, Sussex County, extending on over the boundary into Mount Olive Township, Morris County, on Morris Canal and on Delaware, Lackawanna and Western R. R	Lake Hopatcong.
Stanley; village in northern part of Summit Township, Union County, on Passaic River	Plainfield.
Stanton; village in southwestern part of Readington Township, Hunterdon County	High Bridge.
Stanton Station; village in southwestern part of Readington Township, Hunterdon County, on South Branch of Raritan River and on Lehigh Valley R. R	High Bridge.
Star Landing; village in eastern part of Woodbridge Township, Middlesex County, on Arthur Kill	Staten Island.
Starrs Station; part of Camden City, on Camden and Atlantic R. R	Philadelphia.
Staten Island; called Arthur Kill and Kill van Kull; sound separating Staten Island from Middlesex and Union counties, and extending from Raritan Bay to Newark Bay and New York Upper Bay.	Plainfield. Staten Island.

	Names of sheets.
; neck of land between Newport and Phillips creeks, reenwich Township, Cumberland County	Bayside.
village in northern part of Harmony Township, en County, on Delaware River and Belvidere Divi- f Pennsylvania R. R	Delaware Water Gap.
n; bay in coast swamp in Galloway Township, At- c County	Atlantic City.
n; bay in coast swamp in Egg Harbor Township, At- c County, flows into Great Egg Harbor	Great Egg Harbor.
n; landing in Weymouth Township, Atlantic County, reat Egg Harbor River	Great Egg Harbor.
n Thorofare; passage in coast swamp in Galloway ship, Atlantic County	Atlantic City.
nsville; village in southern part of Egg Harbor ship, Atlantic County	Great Egg Harbor.
ntown; village in southern part Upper Township, May County	Tuckahoe.
n; brook in Commercial Township, Cumberland ty, flows into Maurice River	Bridgeton.
village in southwestern part of Raritan Township, lesex County, on Pennsylvania R. R	Plainfield.
s; creek rising in northwestern part of Weymouth ship, Atlantic County, flows southeast into Great Harbor River.	Tuckahoe. Great Egg Harbor.
s; brook in eastern part of Roxbury Township, flow- to Morris Canal and tributary to Rockaway River.	Lake Hopatoong.
sburg; village in western part of Washington Town- Morris County	Hackettstown.
sville; town in northern part of Greenwich Town- Warren County, on Morris Canal and on the Dela- , Lackawanna, and Western R. R	Easton.
pond in western part of Andover Township, Sussex ty	Wallpack.
pond in western part of Pequannock Township, is County	Morristown.
use; brook in Manalapan Township, Monmouth ty, flowing into Manalapan brook	New Brunswick.
n; brook in Greenwich Township, Gloucester County, tary to Ramapo Creek	Chester.
n; brook in Glassboro, Clayton, and Franklin Town- , Gloucester County, flows into Maurice River	Glassboro.
ley; village in western part of Greenwich Township, en County	Easton.
er; township in Sussex County; area, 38 square	Hackettstown. Wallpack.
er; village in southwestern part of Stillwater Town- Sussex County, on Paulins Kill	Wallpack.
islands in swamp in southwestern part of Dennis ship, Cape May County	Dennisville.
village in eastern part of Passaic Township, Morris ty, on Passaic and Delaware R. R	Plainfield.
sound in northeastern part of Middle Township, May County.	Dennisville. Sea Isle.

	Names of sheets.
Stockholm; village in southeastern part of Hardyston Township, on New York, Susquehanna, and Western R. R., in Sussex County	Franklin.
Stockton; township in Camden County; area, 15 square miles	Philadelphia.
Stockton; village in Stockton Township, Camden County, on Pennsylvania R. R.	Philadelphia.
Stockton; village in southern part of Delaware Township, Hunterdon County, on Delaware River	Lambertville.
Stone; hill in Atlantic Township, Monmouth County; elevation, 194 feet	Sandy Hook.
Stone Bridge Run; brook in Deerfield and Bridgeton Townships, Cumberland County, flows into Cohansey Creek	Bridgetown.
Stone Hollow Branch; brook in Stafford Township, Ocean County, flows into Mill Creek	Little Egg Harbor.
Stone House; brook in Pequannock Township, Morris County, tributary to Pequannock River.	Greenwood Lake. Morristown.
Stonetown; village in western part of Pompton Township, Passaic County	Greenwood Lake.
Stony; brook rises in Hunterdon County, flows east through Mercer County, and empties into Millstone River after forming boundary between Princeton and West Windsor Townships.	Lambertville. Princeton.
Stony; brook rising in Pequannock Township, flows southwest through Montville Township and Boonville Township, emptying into Rockaway River in southeastern part of Rockaway Township, Morris County	Morristown.
Stony; brook in Washington Township, Morris County, tributary to South Branch Raritan River	Hackettstown.
Stony; brook, rises in Warren Township, flows across South Plainfield Township, and empties into Green Brook, in Somerset County	Plainfield.
Stony; inlet projecting from Delaware River into Lower Alloways Creek Township, Salem County	Bayside.
Stop-the-jade; brook in Southampton Township, on boundary between that and Pemberton townships, Burlington County, flows into South Branch of Rancocas Creek.	Mount Holly. Pemberton.
Stormy; hill in Randolph Township, Burlington County; elevation, 72 feet	Mullica.
Story; island in Little Egg Harbor, in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Stout; creek in Lacey Township, Ocean County, flows in Barnegat Bay	Barnegat.
Stoutsburg; village in western part of Montgomery Township, Somerset County	Princeton.
Stow; creek heading in Lower Alloways Creek Township, Salem County, flows south, forming boundary between Stow Creek and Greenwich townships, Cumberland County, and Lower Alloways Creek Township, into Delaware River	Bayside.
Stow Creek; township in Cumberland County; area, 19 square miles.	Bayside. Salem.
Straight; creek (passage) in coast swamp in Downe Township, Cumberland County	Maurice River.

	Names of sheets.
Stretche Run; brook in Lower Alloways Creek Township, Salem County, and Hopewell Township, Cumberland County, flows into Cohansey Creek.	Bridgeton. Salem.
Styx River; an arm of Lake Hopatcong indenting the eastern coast of Byram Township, Sussex County	Lake Hopatcong.
Succasunna; village in southeastern part of Roxbury Township, Morris County, on Chester branch of Delaware, Lackawanna and Western R. R	Lake Hopatcong.
Success; village in Jackson Township, Ocean County	Cassville.
Sucker; pond in western part of Stillwater Township, Sussex County	Wallpack.
Sugarloaf; hill in Atlantic Township, Monmouth County; elevation, 199 feet	Sandy Hook.
Summerfield; village in southern part of Oxford Township, Warren County	Delaware Water Gap.
Summit; township in Union County; area, 6 square miles	Plainfield.
Summit; village in Summit Township, Union County, on Delaware, Lackawanna and Western R. R	Plainfield.
Sunfish; pond in Pahaquarry Township, Warren County	Bushkill Falls.
Sunken Branch; brook forming partial boundary between Dover and Berkeley townships; tributary to Toms River.	Barnegat.
Sunset; lake in Ocean Township, Monmouth County	Asbury Park.
Sussex; county in extreme northern part of State; area, 535 square miles.	Hackettstown. Lake Hopatcong. Wallpack. Milford. Port Jervis. Franklin. Goshen. Greenwood Lake.
Sussex Mills; village in western part of Sparta Township, Sussex County	Franklin.
Swain; railroad station in north central part of Middle Township, Cape May County, on West Jersey R. R	Dennisville.
Swan; point projecting from Metedeconk Neck, in Brick Township, Ocean County, into Barnegat Bay	Asbury Park.
Swan; pond in southeastern part of Weymouth Township, Atlantic County	Great Egg Harbor.
Swan; bay; an enlargement of Mullica River, in Bass River Township, Burlington County	Little Egg Harbor.
Swann; channel in southeastern part of Lower Township; tributary to Grassy Sound	Cape May.
Swartswood; village in eastern part of Stillwater Township, Sussex County, on Swartswood Lake	Wallpack.
Swartswood; lake in eastern part of Stillwater Township, Sussex County	Wallpack.
Swartswood Station; village in western part of Hampton Township, Sussex County, on Paulins Kill and on New York, Susquehanna and Western R. R	Wallpack.
Swayzes Mills; village in western part of Hope Township, Warren County, on Muddy Brook	Hackettstown.
Swede Run; brook in Mannington Township, Salem County, flows into Mannington Creek	Salem.

	Names of sheets.
Swede Run; brook in Chester and Delran townships, Burlington County, flows into Delaware River.	Burlington. Mount Holly.
Swedesboro; town in Gloucester County, on West Jersey R. R.	Salem.
Sweeten Water; small brook in northwestern part Maurice River Township, Cumberland County, flows into Manumuskin River	Tuckahoe.
Swimming; river heading in three branches; forms partial boundary between Middletown and Shrewsbury townships, Monmouth County; flows into Navesink River	Sandy Hook.
Swimming; creek in northeastern part of Dennis Township, Cape May County, flowing into Ludlam Bay	Sea Isle.
Swinefield Bridge; village in southeastern part of Hanover Township, Morris County, on Passaic River	Morristown.
Swinesburg; village in northern part of Alexandria Township, Hunterdon County	Easton.
Sykes Branch; brook in Woodland Township, Burlington County, tributary to Shoal Branch	Whitings.
Sykesville; village in New Hanover Township, Burlington County	Bordentown.
Tabernacle; village in Shamong Township, Burlington County	Pemberton.
Tabor; village in northwestern part of Hanover Township, Morris County, on Delaware, Lackawanna and Western R. R	Morristown.
Tammany; hill in northwestern part of Knowlton extending into Pahaquarry Township, Warren County; altitude, 1,600 feet	Delaware Water Gap.
Tanners; brook, tributary to Black River, in Washington and Chester townships, Morris County.	Lake Hopatcong. Hackettstown.
Tarkiln Branch; brook in Landis Township, Cumberland County, flows into Parvin Branch of Maurice River	Bridgeton.
Tarkiln; brook heading in Maurice River Township, Cumberland County, flows northeast across Upper Township, Cape May County, into Tuckahoe River	Tuckahoe.
Tarkiln; brook in Brick Township, Ocean County, tributary to Kettle Creek	Asbury Park.
Tatems; village in West Deptford Township, Gloucester County, on West Jersey R. R	Philadelphia.
Tatham; life-saving station on east coast Middle Township, Cape May County	Sea Isle.
Taunton; village in Evesham Township, Burlington County.	Mount Holly.
Taylortown; village in northwestern part Montville Township, Morris County	Morristown.
Taylorville; village in northeastern part Ridgefield Township, Bergen County	Harlem.
Tea Neck; village in southern part of Englewood Township, Bergen County	Paterson.
Telegraph; hill in Middletown Township, Monmouth County; elevation 252 feet	Sandy Hook.
Ten Mile Hollow; valley in Lacey and Berkeley townships, Ocean County	Whitings.
Ten Mile Run; river rises in south Brunswick Township, *Middlesex* County, and flows into Millstone River, in *Franklin* Township, Somerset County	Princeton.

	Names of sheets.
en Mile Run; village in Franklin Township, Somerset County	Princeton.
enafly; town in eastern part of Palisade Township, Bergen County, on Tienekill Creek and on Northern R. R. of New Jersey	Harlem.
ennent; brook in Madison Township, Middlesex County; flows into Smith River	New Brunswick.
ennent; village in Manalapan Township, Monmouth County, on Freehold and Jamesburg R. R.	New Brunswick.
epehemus; brook in Marlboro and Manalapan townships, Monmouth County, flows into McGellaird Brook	New Brunswick.
erhunes; run in South Brunswick Township, Middlesex County, tributary to Lawrence Brook	Princeton.
errace; pond in western part of West Milford Township, Passaic County	Greenwood Lake.
errapin Gut; brook in Lower Alloways Creek Township, Salem County, flows into Mad Horse Run	Bayside.
ewksbury; township in Hunterdon County, area 32 square miles.	High Bridge. Somerville.
exas; village in Monroe Township, Middlesex County, on Matchaponix Brook	New Brunswick.
hree Bridges; village in southern part Reading Township, Hunterdon County, on South Branch of Raritan River, on Lehigh Valley R. R., and South Branch Central R. R. of New Jersey	High Bridge.
hree Tuns; village in Mansfield Township, Burlington County	Bordentown.
hompsons; point projecting from Greenwich Township, Gloucester County, into the Delaware River	Chester.
hompsontown; village in Hamilton Township, Atlantic County, on Great Egg Harbor River	Great Egg Harbor.
horofare; island in Manahawken Bay, in Stafford Township, Ocean County	Long Beach.
horofare; village in West Deptford Township, Gloucester County, on Delaware River R. R	Philadelphia.
ibbs Branch; brook in Woodland Township, Burlington County, flows into Gates Branch	Pemberton.
ices; pond in eastern part of Pompton Township, Passaic County	Greenwood Lake.
ienekill; creek in Harrington and Palisade townships, Bergen County, tributary to Hackensack River	Harlem.
ilton; point on coast of Dover Township, Ocean County	Barnegat.
indale; run in Delaware Township, Camden County, tributary to Coopers Creek	Philadelphia.
indall; island in coast swamp in Greenwich Township, Cumberland County	Bayside.
indell; landing in Fairfield Township, Cumberland County, on Cohansey Creek	Bridgeton.
inton Falls; village in Shrewsbury Township, Monmouth County, on Pine Brook	Sandy Hook.
imber; small brook in northern part of Rockaway Township, Morris County; tributary to Pequannock River	Greenwood Lake.
imber and Beaver; swamp in northeastern part of Middle Township and southeastern part of Dennis Township, Cape May County	Dennisville.

	Names of sheets.
Timber Run; brook in Monroe Township, Middlesex County, flows into Rock Brook	New Brunswick.
Timbuctoo; village in West Hampton Township, Burlington County	Burlington.
Titusville; village in western part of Hopewell Township, Mercer County, on Delaware River and Pennsylvania R. R., Belvidere division, and on Delaware and Raritan Canal..	Lambertsville.
Tomlins; village in Greenwich Township, Gloucester County, on West Jersey R. R	Chester.
Toms; river forming boundary between Dover and Berkeley townships, Ocean County; flows into Barnegat Bay.	Cassville, Asbury Park, Barnegat.
Toms Point; hill in southeastern part of Pequannock Township, Morris County; altitude, 223 feet	Morristown.
Toms River; life-saving station on reef in Berkeley Township, Ocean County	Barnegat.
Toms River; village in Dover Township, Ocean County, on Toms River	Barnegat.
Toneys; brook in Montclair and Bloomfield townships, Essex County; tributary to Second River	Paterson.
Totowa; village in southwestern part of Manchester Township, Passaic County	Paterson.
Town Bank; beach on western coast of Lower Township, Cape May County	Cape May.
Town Neck; creek in Shrewsbury Township, Monmouth County; flows into Shrewsbury River	Sandy Hook.
Townsbury; village in southern part of Hope Township, Warren County, on Pequest River, and on Lehigh and Hudson River R. R	Hackettstown.
Townsend; inlet extending from Atlantic Ocean into northeastern coast Middle Township, Cape May County.	Dennisville. Sea Isle.
Townsend; sound in southeastern part of Dennis Township, Cape May County	Sea Isle.
Townsend Inlet; life-saving station at boundary between Dennis and Middle townships, on coast of Cape May county	Sea Isle.
Townsend Inlet; village in central part of Middle Township, Cape May County	Dennisville.
Tracey; village in Monroe Township, Middlesex County, on Freehold and Jamesburg R. R	New Brunswick.
Tranquility; village in southern part of Green Township, Sussex County, on Lehigh and Hudson River R. R	Hackettstown.
Tremley; village in southeastern part of Linden Township, Union County, on New York and Long Branch R. R.	Staten Island.
Trenton; city, capital of the State, in Mercer County; area, 3 square miles.	Bordentown, Burlington.
Trenton Junction; village in Ewing Township, Mercer County, at junction of Trenton Branch with New York division of Philadelphia and Reading R. R	Lambertville.
Troy; brook in Hanover Township, Morris County; tributary to Whippany River	Morristown.
Troy; meadows in eastern part of Hanover Township, Morris County	Morristown.
Troy Hills; village in central part of Hanover Township, Morris County, on Troy Brook	Morristown.

	Names of sheets.
Trout; brook rising in Frelinghuysen Township, Warren County; flows southwest and empties into Beaver Brook, in northern part of Hope Township	Hackettstown.
Trout; brook in Stillwater Township, Sussex County; tributary to Paulins Kill	Wallpack.
Trout Run; village in Gloucester Township, Camden County, on Camden and Atlantic R. R	Mount Holly.
Tub Mill Branch; small brook in Bass River Township, Burlington County; flows into Wading River.	Mullica. Little Egg Harbor.
Tuckahoe; river rising in southern part of Buena Vista Township; flows south, forming boundary between Maurice River and Weymouth townships, then southeast, forming boundary between Weymouth and Upper townships, into Great Egg Harbor.	Tuckahoe. Great Egg Harbor.
Tucker; beach along coast of Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Tucker; island in Little Egg Harbor, in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Tucker Beach; light on Tucker Beach, Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Tuckerton; creek in Little Egg Harbor Township, Burlington County; formed by the union of Shord Mill Brook and Gifford Mill Branch and flows into Little Egg Harbor	Little Egg Harbor.
Tuckerton; village in Little Egg Harbor Township, Burlington County, on Tuckerton R. R	Little Egg Harbor.
Tuft; point of land projecting from eastern coast of Woodbridge Township, Middlesex County, into Arthur Kill	Staten Island.
Tulepehauken; brook in Randolph Township, Burlington County; flows into West Branch of Wading River	Mullica.
Tumble; village in southwestern part of Kingwood Township, Hunterdon County, on Delaware River and on Belvidere division Pennsylvania R. R	Doylestown.
Tune Branch; brook in Brick Township, Ocean County; flows into Kettle Creek	Asbury Park.
Turkey; brook in southern part of Mount Olive Township, Morris County; tributary to South Branch of Raritan River	Lake Hopatcong.
Turkey; point of dry land projecting into the Glades in Downe Township, Cumberland County	Bridgeton.
Turkey; village in Howell Township, Monmouth County	Cassville.
Turner's Fork; brook in Lower Alloways Creek Township, Salem County; flows into Terrapin Gut	Bayside.
Turnersville; village in Gloucester Township, Camden County; on South Branch of Timber Creek	Philadelphia.
Turpentine; village in East Hampton Township, Burlington County	Burlington.
Turtle; creek in Randolph Township, Burlington County; flows into Swan Bay	Mullica.
Turtle; cove projecting from Manahawken Bay into Stafford Township, Ocean County	Long Beach.
Turtle; cove projecting from Reed Bay into Galloway Township, Atlantic County	Atlantic City.
Turtle; pond in southeastern part of Green Township, Sussex County	Hackettstown.

	Names of sheets.
Turtle Gut; life-saving station on southeastern coast of Lower Township, Cape May County	Cape May.
Turtle Gut; inlet projecting from Atlantic Ocean into southeastern shore of Lower Township, Cape May County	Cape May.
Turtle Gut; passage in coast swamp in Middle Township, Cape May County	Dennisville.
Tuttle Corner; village in south central part of Sandyston Township, Sussex County	Wallpack.
Tweed; creek in Fairfield Township, Cumberland County; flows into Back Creek	Bayside.
Twilight; lake in Brick Township, Ocean County	Asbury Park.
Two Bridges; village in southern part of Hardyston Township, on New York, Susquehanna and Western R. R., Sussex County	Franklin.
Two Bridges; village in southeastern part of Pequannock Township, Morris County, at junction of Pompton and Passaic rivers	Morristown.
Two Mile; beach on southeastern coast of Lower Township, Cape May County	Cape May.
Two-penny Run; brook in Pilesgrove, Old Mans and Upper Penns Neck townships; flows into Game Creek, Salem County	Salem.
Tyler Park; village in southern part of North Bergen Township, Hudson County, on New York, Susquehanna and Western R. R., and on Northern R. R. of New Jersey	Paterson.
Uncle Tom; village in Egg Harbor Township, Atlantic County	Great Egg Harbor.
Undercliffe; village in Orvil Township, Bergen County	Paterson.
Union; county in northeastern part of the State; area, 105 square miles.	Staten Island. Plainfield.
Union; town in northeastern part of Hudson County	Paterson.
Union; township in Bergen County; area, 10 square miles	Paterson.
Union; township in Hudson County; area, 1 square mile	Paterson.
Union; township in Hunterdon County; area, 20 square miles.	Easton High Bridge.
Union; township in Ocean County; area, 45 square miles	Whitings. Long Beach. Barnegat. Little Egg Harbor.
Union; township in Union County; area, 15 square miles	Staten Island. Plainfield.
Union; village in western part of East Amwell Township, Hunterdon County	Lambertville.
Union; village in Raritan Township, Monmouth County	Sandy Hook.
Union; village in southern part of Rockaway Township, Morris County, on Den Brook	Lake Hopatcong.
Union; village in Union Township, Union County, on West Branch of Elizabeth River	Plainfield.
Union; village in northeastern part of Warren Township, Somerset County	Plainfield.
Union Branch; brook in Manchester and Dover townships, Ocean County, tributary to Toms River.	Asbury Park. Cassville. Barnegat.
Union Clay Works; village in Lacey Township, Ocean County	Whitings.

	Names of sheets
ove; village in Pittsgrove Township, Salem County.	Glassboro.
llls; village in Mount Laurel Township, Burlington y, on Mason Creek	Mount Holly.
llley; village in Monroe Township, Middlesex y	New Brunswick.
e; village in southeastern part of Washington Town- Morris County	Hackettstown.
e; village in Galloway Township, Atlantic County.	Mullica.
horofare; passage in coast swamp in Upper Town- Cape May County	Sea Isle.
ownship in Cape May County; area, 79 square miles.	Tuckahoe. Sea Isle. Dennisville. Great Egg Harbor.
ranch; brook rising in Quinton Township, flows west through Lower Alloways Creek Township, ary to Stow Creek.	Salem. Bayside.
pe Island; creek in southern part of Lower Town- Cape May County	Cape May.
eehold; township in Monmouth County; area, 48 e miles.	Cassville. Bordentown.
ngwood; village situated in eastern part of Jeffer- ownship, Morris County	Lake Hopatcong.
acoupin; village in central part of West Milford ship, Passaic County	Greenwood Lake.
Ill; village in Pemberton Township, Burlington y	Pemberton.
ontclair; village in northern part of Montclair Town- Essex County, on New York and Greenwood Lake	Paterson.
ontvale; village in northern part of Washington ship, Bergen County	Ramapo.
eck; village in Pittsgrove Township, Salem County.	Glassboro.
enns Neck; township in Salem County; area, 19 e miles	Salem.
ittsgrove; township in Salem County; area, 36 e miles.	Glassboro. Salem.
whatcong; mountain in Mansfield Township, War- ounty	Hackettstown.
n; village in western part of West Milford Township, ic County	Greenwood Lake.
village in western part of Bethlehem Township, Hun- n County, on New Jersey Central R. R	Easton.
Station; village in Roxbury Township, Morris ty, on Morris Canal and on Chester Branch of Dela- Lackawanna and Western R. R	Lake Hopatcong.
ens; brook rising in Wallpack Township, Sussex ty, flowing southwest into Warren County, emptying Delaware River in western part of Pahaquarry ship.	Bushkill Falls. Wallpack.
urg; village in Atlantic Township, Monmouth County.	Sandy Hook.
ille; village in Jackson Township, Ocean County.	Cassville.
s Corners; village in central part of East Amwell ship, Hunterdon County	Lambertville.

	Names of sheets.
Vansyckles; village in Wantage Township, Sussex County, on New York, Susquehanna and Western R. R.	Port Jervis.
Van Syckles; village in northern part of Union Township, Hunterdon County	High Bridge.
Vernon; township in Sussex County; area, 69 square miles.	Greenwood Lake. Goshen. Franklin. Port Jervis.
Vernon; village in central part of Vernon Township, Sussex County	Greenwood Lake.
Verona; village in southeastern part of Caldwell Township, Essex County, on Peckman Brook	Paterson.
Vienna; village in western part of Independence Township, Warren County, on Pequest River	Hackettstown.
Villa Park; village in Wall Township, Monmouth County, on New York and Long Branch R. R	Asbury Park.
Vincentown; town in Southampton Township, Burlington County, on Vincentown and Evanstown Branch R. R. and on South Branch of Rancocas Creek.	Mount Holly. Pemberton.
Vineland; borough in Cumberland County	Bridgeton.
Vliettown; village in western part of Bedminster Township, Somerset County, on Lamington River	Somerville.
Vol Sedge; islands in Union Township, Ocean County, in Barnegat Bay	Long Beach.
Voorhees; village in eastern part of Franklin Township, Somerset County, on Mill Branch, Pennsylvania R. R.	New Brunswick.
Wading; river heading in two branches, the Oswego River, or East Branch, and the West Branch; flowing southeast forms boundary between Bass River and Randolph townships, Burlington County, emptying into Mullica River	Pemberton. Mullica. Little Egg Harbo
Wading Thorofare; passage in coast swamp in Galloway Township, Atlantic County	Atlantic City.
Waldwick; village in Orvil Township, Bergen County	Ramapo.
Wall; small pond in southeastern part of Maurice River Township, Cumberland County	Tuckahoe.
Wall; township in Monmouth County; area, 41 square miles.	Sandy Hook. Asbury Park.
Wallace Corner; village in southwestern part of West Milford Township, Passaic County, on Pequannock River and on New York, Susquehanna and Western R. R	Greenwood Lake.
Wallkill; river heading in Byram Township, Sussex County, flowing north through Sparta and Hardyston Townships, and forms boundary between Wantage and Vernon townships; thence passing into New York, intersecting Orange and Ulster counties, and uniting with Rondout River about 6 miles from Hudson River, of which the Rondout is a tributary	Franklin.
Wallpack; bend of Delaware River around southwest coast Wallpack Township, Sussex County	Wallpack.
Wallpack; township in Sussex County; area, 23 square miles.	Wallpack.
Wallpack Center; village in northern part of Wallpack Township, Sussex County	Wallpack.
Walnford; village in Upper Freehold Township, Monmouth County, on Crosswick Creek	Bordentown.

	Names of sheets.
Walnut; brook in Raritan Township, Hunterdon County, tributary to Meshanic River.	High Bridge. Lambertville.
Walnut Valley; village in western part of Blairstown Township, Warren County	Delaware Water Gap.
Wanaque; village in southern part of Pompton Township, Passaic County, on Wanaque River and on New York and Greenwood Lake R. R.	Greenwood Lake.
Wanaque; river heading in Greenwood Lake, West Milford Township, Passaic County. It joins the Pequannock River at Pompton and together they form the Pompton River.	Morristown. Greenwood Lake.
Wantage; township in Sussex County; area, 68 square miles.	Port Jervis. Franklin.
Wardell Neck; point of land extending into Metedeconk River, in Brick Township, Ocean County	Asbury Park.
Ware Thorofare; passage in coast swamp in Dennis Township, Cape May County	Sea Isle.
Waretown; creek in Ocean Township, Ocean County; flows into Barnegat Bay	Barnegat.
Waretown; village in Ocean Township, on New Jersey Southern R. R., in Ocean County	Barnegat.
Waretown Station; village in Ocean Township, Ocean County	Barnegat.
Warford; creek in Kingwood Township, Hunterdon County; tributary to Delaware River	Doylestown.
Warne; brook in Madison Township, Middlesex County; flows into Tennent Brook	New Brunswick.
Warren; county in northwestern part of State on Delaware River; area, 365 square miles.	Bushkill Falls. Wallpack. Hackettstown. High Bridge. Delaware Water Gap. Easton.
Warren; township in Somerset County; area, 19 square miles.	Plainfield. Somerville.
Warrenville; village in south central part Allamuchy Township, Warren County	Hackettstown.
Warrenville; village in eastern part of Warren Township, Somerset County	Plainfield.
Warrington; village in central part of Knowlton Township, Warren County, on Paulins Kill and on New York, Susquehanna and Western R. R	Delaware Water Gap.
Washington; borough in central part Washington Township, Warren County, on Morris Canal, at junction of Delaware, Lackawanna and Western R. R. with its Morris and Essex Division	Hackettstown.
Washington; town in northeastern part of East Brunswick Township, Middlesex County, on South River	New Brunswick.
Washington; township in Bergen County; area, 24 square miles.	Harlem. Tarrytown. Ramapo. Paterson.
Washington; township in Burlington County; area, 42 square miles	Mullica.

	Names of sheets.
ashington; township in Gloucester County; area, 23 square miles.	Philadelphia. Glassboro.
ashington; township in Mercer County; area, 21 square miles.	Princeton. Bordentown.
Vashington; township in Morris County; area, 45 square miles.	Lake Hopatcong. Hackettstown. High Bridge. Somerville.
Washington; township in Warren County; area, 18 square miles.	Delaware Water Ga Hackettstown. High Bridge. Easton.
Washington; valley in Bridgewater and Warren townships, Somerset County.	Plainfield. Somerville.
Washington; village in northwestern part of Green Township, Sussex County....................................	Hackettstown.
Washington; village on boundary line between Randolph and Washington townships, Burlington County.........	Mullica.
Washington Corner; village in southeastern part of Mendham Township, Morris County..........................	Lake Hopatcong.
Washington Crossing; village in western part of Hopewell Township, Mercer County, on Delaware River and on Delaware and Raritan Canal and Belvidere Division, Pennsylvania R. R..	Lambertville.
Washington Place; village in southwestern part of Livingston Township, Essex County..........................	Morristown.
Washington Valley; village in western part Morris Township, Morris County..................................	Lake Hopatcong.
Washingtonville; village in eastern part Hampton Township, Sussex County, on Paulins Kill and on New York, Susquehanna and Western R. R.	Wallpack. Franklin.
Washingtonville; village in North Plainfield Township, Somerset County, on Stony Brook..........................	Plainfield.
Watchung; village in Montclair Township, Essex County, on New York and Greenwood Lake R. R.................	Paterson.
Waterford; township in Camden County; area, 57 square miles.	Mount Holly. Mullica. Hammonton.
Waterford; village in Winslow Township, Camden County, on Camden and Atlantic R. R...........................	Hammonton.
Watering Place Branch; brook in Brick Township, Ocean County; flows into Lake Corasaljo.......................	Asbury Park.
Watering Race; brook in Hamilton Township, Atlantic County; flows into Babcock Creek.	Mullica. Great Egg H
Waterloo; village in southwestern part of Byram Township, Sussex County, on the boundary extending into Mount Olive Township, Morris County, on Morris Canal, Musconetcong River, and Delaware, Lackawanna and Western R. R..	Hackettsto
Watsessing; village in southern part of Bloomfield Township, Essex County, on the Bloomfield Branch of Delaware, Lackawanna and Western R. R., where it crosses the Orange Branch of New York and Greenwood Lake R. R.	Paterson.
reek in Wall Township, Monmouth County......	Asbury P

	Names of sheets.
Waverly; village in southeastern part Clinton Township, Essex County, on Pennsylvania R. R	Staten Island.
Wawayanda; lake in eastern part of Vernon Township, Sussex County	Greenwood Lake.
Wawayanda; mountain range extending through entire central part of Vernon Township, Sussex County	Greenwood Lake.
Wawayanda; village in eastern part of Vernon Township, Sussex County	Greenwood Lake.
Waycake; creek in Middletown, Holmdel and Raritan townships, Monmouth County; flows into Raritan Bay	Sandy Hook.
Waycake; lighthouse on south shore of Raritan Bay	Sandy Hook.
Wayne; township in Passaic County; area, 27 square miles.	Paterson. Morristown. Greenwood Lake.
Wayne; village in western part of Wayne Township, Passaic County; on Morris Canal and on New York and Greenwood Lake R. R	Morristown.
Weakfish Creek; passage in coast swamp in Upper Township, Cape May County	Sea Isle.
Weasel; brook in Aquackanonck Township, Passaic County; passes through Passaic City and empties into Passaic River	Paterson.
Webb Mill; village in Lacey Township, Ocean County, on Webb Mill Branch	Whitings.
Webb Mill Branch; brook in Lacey Township, Ocean County; tributary to Chamberlain or Middle Branch	Whitings.
Weehawken; township in Hudson County; area, 1 square mile	Paterson.
Weekstown; village in Mullica Township, Atlantic County.	Mullica.
Welchville; village in Mannington Township, Salem County.	Salem.
Weldon; brook rising in western part of Jefferson Township, Morris County; it flows southwesterly into Lake Hopatcong in southwestern part of same township.	Franklin. Lake Hopatcong.
Well; island in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
Well Mills; village in Lacey Township, Ocean County	Whitings.
Wellwood Station; part of Merchantville Borough, Camden County, on Amboy Division of Pennsylvania R. R	Philadelphia.
Wemrock; brook in Freehold and Manalapan townships, Monmouth County; flows into Matchaponix Brook	New Brunswick.
Wenonah; borough in Deptford Township, Gloucester County, on Mantua Creek and on West Jersey R. R	Philadelphia.
Wertsville; village in eastern part East Amwell Township, Hunterdon County	Lambertville.
Wescoatville; village in Mullica Township, Atlantic County.	Mullica.
Wescott Mills; village in Monroe Township, Middlesex County, on Millstone River	New Brunswick.
Wescottville; village in Deptford Township, Gloucester County	Philadelphia.
Wesickaman; creek in Shamong Township, Burlington County, flows into Mullica or Atsion River.	Mullica. Pemberton.
West; brook in West Milford and Pompton townships, Passaic County, tributary to Wanaque River	Greenwood Lake.

	Names of sheets.
West Amwell; township in Hunterdon County; area, 20 square miles	Lambertville.
West Bergen; part of Jersey City, on Hackensack River and on Newark and New York R. R	Staten Island.
West Branch; brook in Hopewell Township, Cumberland County, flows into Cohansey Creek	Salem.
West Branch; brook tributary to Wading River, in Randolph Township, Burlington County	Mullica.
West Branch of Papakating Creek; rises in western part of Wantage Township, flows in a southeasterly direction, and empties into Papakating Creek, in southern part of same township, Sussex County	Franklin.
West Cape May; borough in southwestern part of Cape May County	Cape May.
West Creek; village in western part of Dennis Township, Cape May County	Dennisville.
West Creek; village in Little Egg Harbor Township, Burlington County	Little Egg Harbor.
West Creek Landing; village in northwestern part of Dennis Township, Cape May County, on West Creek	Dennisville.
West Deptford; township in Gloucester County; area, 20 square miles	Philadelphia.
West End; village in western part of Bethlehem Township, Hunterdon County, on Lehigh Valley R. R	Easton.
West End; village in Ocean Township, Monmouth County, at junction of two branches of New York and Long Branch R. R	Sandy Hook.
West Englewood; village in western part of Englewood Township, Bergen County, on West Shore R. R	Paterson.
West Farm; village in Howell Township, Monmouth County.	Asbury Park.
West Freehold; village in Freehold Township, Monmouth County	Cassville.
West Hampton; township in Burlington County; area, 11 square miles.	Burlington. Mount Holly.
West Hoboken; township in Hudson County; area, 1 square mile	Paterson.
West Jersey Cranberry Meadow; marsh in Medford and Shamong townships, Burlington County, and Waterford Township, Camden County	Mount Holly.
West Livingston; village in southwestern part of Livingston Township, Essex County	Morristown.
West Milford; township in Passaic County; area, 80 square miles	Greenwood Lake.
West Milford; village in central part of West Milford Township, Passaic County	Greenwood Lake.
West Orange; township in Essex County; area, 12 square miles.	Paterson. Morristown.
West Rutherford; village in northern part Union Township, and partly in Boiling Springs Township, Bergen County, on Passaic River and on New York, Lake Erie and Western R. R	Paterson.
West Summit; village in northeastern part New Providence Township, Union County, on Passaic and Delaware R. R.	Plainfield.
West Windsor; township in Mercer County; area, 26 square miles.	Princeton. Bordentown.

	Names of sheets.
Westecunk; creek in Little Egg Harbor Township, Burlington County, and Eagleswood Township, Ocean County; flows into Little Egg Harbor	Little Egg Harbor.
Westfield; township in Union County; area, 11 square miles.	Plainfield.
Westfield; village in Westfield Township, Union County, on Central R. R. of New York	Plainfield.
Westmont Station; village in southeastern part of Haddon Township, Camden County, on Camden and Atlantic R. R.	Philadelphia.
Weston; village in northwestern part of Franklin Township, Somerset County, on Millstone River and on Delaware and Raritan Canal	Somerville.
Westville; village in southwestern part of Caldwell Township, Essex County	Morristown.
Westville; village in West Deptford Township, Gloucester County, on Big Timber Creek and on West Jersey R. R.	Philadelphia.
Westwood; village in southern part of Washington Township, Bergen County, on Pascack Creek and on New Jersey and New York R. R	Paterson.
Weymouth; township in Atlantic County; area, 76 square miles.	Tuckahoe. Great Egg Harbor.
Weymouth; village in Hamilton Township, Atlantic County, on Great Egg Harbor River	Hammonton.
Whale; creek in Matawan Township, Monmouth County, flowing into Raritan Bay	Sandy Hook.
Whale Pond; a continuation of Cranberry Brook, forming boundary between Eatontown and Ocean townships, Monmouth County, flows into Atlantic Ocean	Sandy Hook.
Wheat Road; station on New Jersey Southern R. R., in Buena Vista Township, Atlantic County	Hammonton.
Wheatland; village in Manchester Township, Ocean County, on New Jersey Southern R. R	Whitings.
Wheatsheaf; village in western part of Linden Township, Union County	Plainfield.
Whig Lane; village in Upper Pittsgrove Township, Salem County	Glassboro.
Whippany; river rising in Mendham Township; flowing east through Morris and Hanover townships and emptying into Rockaway River near where it joins the Passaic River, in Morris County.	Morristown. Lake Hopatcong.
Whippany; town in southern central part of Hanover Township, Morris County, on Whippany River	Morristown.
Whirlpool Channel; passage in coast swamp in Egg Harbor Township, Atlantic County	Great Egg Harbor.
White; pond in southern part of Hardwick Township, Warren County.	Wallpack. Hackettstown.
White; small pond in southwestern part of Andover Township, Sussex County	Wallpack.
White; station in Dover Township, Ocean County, on New Jersey Southern R. R	Cassville.
White Bridge; village in Bernard Township, Somerset County, on Passaic River.	Somerville.
White Bridge; village in Jackson Township, Ocean County, on Toms River	Cassville.
White Creek; passage in coast swamp in Upper Township, Cape May County	Sea Isle.

	Names of sheets.
White Horse; village in Hamilton Township, Mercer County.	Bordentown.
White Horse; village in Woodland Township, Burlington County	Pemberton.
White House; village in northern part of Readington Township, Hunterdon County, on Rockaway Creek and on Central R. R. of New Jersey	High Bridge.
White Lake; small pond in northwestern part of Sparta Township, Sussex County	Franklin.
White Marsh Run; brook in Millville Township, Cumberland County, flows into Maurice River	Bridgeton.
White Meadow; small brook in western part of Rockaway Township, Morris County, tributary to Beaver Brook	Lake Hopatcong.
White Oak; brook in Landis and Commercial townships, Cumberland County, flows into Manumuskin River	Tuckahoe.
White Oak; island in swamp in Independence Township, Warren County	Hackettstown.
White Oak Bottom; village in Dover Township, Ocean County	Asbury Park.
White Oak Branch; brook in Franklin and Monroe townships, Gloucester County, flows into Hospitality Branch of Great Egg Harbor River	Hammonton.
Whitesville; village in Neptune Township, Monmouth County	Asbury Park.
Whitings; village in Manchester Township, Ocean County, on Philadelphia and Long Branch R. R	Whitings.
Whitehall; village in southern part of Andover Township, Sussex County, on Sussex R. R	Lake Hopatcong.
Whitehall; village in southern part of Lebanon Township, Hunterdon County	High Bridge.
Whitehall; brook in Franklin and Monroe townships, Gloucester County, flows into Hospitality Branch of Great Egg Harbor River.	Glassboro. Hammonton.
Whitehall; village in eastern part of Montville Township, Morris County, on Morris Canal, and on Boonton Branch of Delaware, Lackawanna and Western R. R	Morristown.
Wickatunk; village in Marlboro Township, Monmouth County, on Freehold and New York R. R	Sandy Hook.
Wickecheoke; creek in Raritan and Delaware townships, Hunterdon County, tributary to Delaware River	Lambertville.
Wigwam; brook in Montclair and West Orange townships, Essex County, tributary to Second River	Paterson.
Wilburtha; village in Ewing Township, Mercer County, on Delaware River, on Delaware and Raritan Canal, and on Belvidere Division of the Pennsylvania R. R	Lambertville.
Wild Cat Branch; brook in Waterford Township, Camden County, flows into Mechesactauxin Branch of Mullica River	Hammonton.
Wilkins; village in Medford Township, Burlington County, on Medford Branch, Pennsylvania R. R., Amboy Division	Mount Holly.
Williams Mine; situated in southern part Vernon Township, Sussex County	Greenwood Lake.
Williamstown; village in Monroe Township, Gloucester County, on Philadelphia and Reading R. R	Hammonton.

	Names of sheets.
amstown Junction; village at junction of Philadelphia nd Reading R. R., and Philadelphia and Atlantic City t. R., in Winslow Township, Camden County.	Mount Holly. Hammonton.
ingboro; township in Burlington County; area. 7 square iiles	Burlington.
is Run; brook rising in northern part of Dennis Townhip, Cape May County, flowing southwest into East Creek.	Dennisville
is Thorofare; passage in swamp in southeastern part Jpper Township, Cape May County	Great Egg Harbor.
itt Thorofare; passage in coast swamp in Little Egg Iarbor Township, in Burlington County	Little Egg Harbor.
oughby; brook in western part of High Bridge Townhip, Hunterdon County, tributary to Spruce Run	High Bridge.
ow; brook tributary to Hop Brook, forms partial boundry between Holmdel Township and Atlantic and Marloro townships, Monmouth County	Sandy Hook.
ow Grove; village in southeastern part Fanwood Townhip, Union County	Plainfield.
ow Grove; village in Landis Township, Cumberland 'ounty	Glassboro.
on; landing in Hamilton Township, Atlantic County, n Gravelly Run	Great Egg Harbor.
on; village in Chester Township, Burlington County, on 'ennsylvania R. R	Mount Holly.
on; village in Winslow Township, Camden County	Mount Holly.
low; township in Camden County; area, 59 square iiles.	Hammonton. Mount Holly. Glassboro.
low; village in Winslow Township, Camden County, on ew Jersey Southern R. R	Hammonton.
low Junction; village in Winslow Township, Camden ounty	Hammonton.
isor; village in Washington Township, Mercer County, 1 Pennsylvania R. R., Amboy Division	Bordentown.
Run; brook in Bass River Township, Burlington County, ows into Bass River	Little Egg Harbor.
d; swamp in Plumstead Township, Ocean County	Cassville.
dbine; village in northern part of Dennis Township, ape May County, on West Jersey R. R	Dennisville.
dbourne; village in south central part of Wantage Townip, on Western Branch of Papakating Creek, in Sussex ounty	Franklin.
dbridge; creek in Woodbridge Township, Middlesex ounty, tributary to Arthur Kill	Plainfield.
dbridge; township in Middlesex County; area, 30 square iles.	Staten Island. Plainfield.
dbridge; village in central part of Woodbridge Townip, Middlesex County, on Heard Brook, and on Perth mboy Branch, Pennsylvania R. R	Plainfield.
dbury; city in Gloucester County, on Woodbury Creek, id at junction of three branches of West Jersey R. R.; :ea, 2 square miles	Philadelphia.
dbury; creek rises in Deptford Township, Gloucester ounty, flows through West Deptford Township, and ience empties into Delaware River	Philadelphia.

	Names of sheets.
Woodcliff; village in central part of Washington Township, Bergen County, on Pascack Creek, and on New Jersey and New York R. R	Ramapo.
Woodfern; village in southwestern part of Branchburg Township, Somerset County, on South Branch of Raritan River, on South Branch R. R., and on Lehigh Valley R. R	High Bridge.
Woodland; township in Burlington County; area, 117 square miles.	Whitings. Pemberton.
Woodmansie; village in Woodland Township, Burlington County, on New Jersey Southern R. R	Whitings.
Woodport; village in western part of Jefferson Township, Morris County, on Lake Hopatcong	Lake Hopatcong.
Woodridge; town in western part Lodi Township, Bergen County, on New Jersey and New York R. R	Paterson.
Woodruff; village in Deerfield Township, Cumberland County, on New Jersey Southern R. R	Bridgeton.
Woodruff; village in Plumstead Township, Ocean County	Cassville.
Woodruff; creek in Elizabeth Township, Union County, tributary to Bound Creek	Staten Island.
Woodruff Gap; village in northwestern part Sparta Township, on Lehigh and Hudson River R. R., Sussex County	Franklin.
Woodside; village, part of Newark City, Essex County, on Passaic River, and on Paterson and Newark Branch of New York, Lake Erie and Western R. R	Paterson.
Woodside Park; village, part of Newark City, Essex County, on Second River, at junction of Orange Branch of New York and Greenwood Lake R. R. with New York and Greenwood Lake R. R	Paterson.
Woodstown; borough in Salem County	Salem.
Woodsville; village in northern part of Hopewell Township, Mercer County	Lambertville.
Woolsey; brook in Hopewell Township, Mercer County, tributary to Jacobs Creek	Lambertville.
Woolwich; township in Gloucester County; area, 22 square miles	Salem.
Wortendyke; village in eastern part of Franklin Township, Bergen County, on New York, Susquehanna and Western R. R	Paterson.
Wrangel; brook in Manchester and Berkley townships, Ocean County, tributary to Toms River.	Barnegat. Whitings.
Wreck; pond in Wall Township, Monmouth County, flows into Sea Island Inlet	Asbury Park.
Wrights; small pond in central part Byram Township, Sussex County	Lake Hopatcong.
Wrightstown; village in New Hanover Township, Burlington County, on Pemberton and Hightstown R. R	Bordentown.
Wrightsville; village in Upper Freehold Township, Monmouth County	Bordentown.
Wyckoff; village in central part Franklin Township, Bergen County, on New York, Susquehanna and Western R. R.	Ramapo.
Wykertown; village in eastern part Frankford Township, Sussex County	Franklin.
Wyoming; village in Millburn Township, Essex County, on Delaware, Lackawanna and Western R. R	Plainfield.

	Names of sheets.
Yantecaw; river rising in eastern part Essex County, flows through Franklin Township same county, and across southeastern part Acquackanonck Township, Passaic County, into Passaic River	Paterson.
Yard; creek in western part Blairstown Township, Warren County, flows southwest into Paulins Kill in central part of Knowlton Township	Delaware Water Gap.
Yard; creek rising in Catfish Pond, Pahaquarry Township, Warren County, empties into Paulins Kill at Harrisburg.	Bushkill Falls. Delaware Water Gap.
Yardville; village in Hamilton Township, Mercer County, on Doctor Creek	Bordentown.
Yellow; brook in Howell and Atlantic townships, Monmouth County, tributary to Swimming River	Sandy Hook.
Yellow Brook; village in Howell Township, Monmouth County	Asbury Park.
Young; island in swamp in Independence Township, Warren County	Hackettstown.
Youngstown; village in Randolph Township, Morris County.	Lake Hopatcong.
Yorktown; village in Pilesgrove Township, Salem County	Salem.
Zebs Bridge; village in Berkeley Township, Ocean County, on Davenport Branch	Whitings.

EOLOGY

DEPARTMENT OF THE INTERIOR

J C Branner

BULLETIN

OF THE

UNITED STATES

OLOGICAL SURVEY

No. 119

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

UNITED STATES GEOLOGICAL SURVEY

J. W. POWELL, DIRECTOR

A GEOLOGICAL RECONNOISSANCE IN NORTHWEST WYOMING

BY

GEORGE HOMANS ELDRIDGE

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

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FIG. 1. Section showing relative positions of coal seams at Red Lodge, Montana 53

LETTER OF TRANSMITTAL.

Department of the Interior,
U. S. Geological Survey,
Division of Geology and Paleontology,
Washington, D. C., March 6, 1894.

Sir: I have the honor to transmit herewith my report of a reconnoissance in northwest Wyoming, made during the summer of 1893, and authorized by you under date of July 1, 1893.

Very respectfully,

Geo. H. Eldridge,
Geologist.

Hon. J. W. Powell,
Director, U. S. Geological Survey.

PREFACE.

The reconnoissance which forms the basis of the following report was authorized with special reference to the coal resources of the Big Horn basin in northwest Wyoming. Incidentally regions adjoining were to be included, and such examinations as time permitted were to be made for oil, building stones, and other economic materials. The route of reconnoissance was, therefore, controlled by these conditions, and many areas could be examined only in a most general way. The southeastern portion of the area mapped was beyond reach, and for this the reports of the Territorial geologists and the maps of the early Hayden Survey were freely consulted.

Formation lines, except in the southeastern area, are drawn upon the map solid or broken, according as the respective portions have been approximately determined by direct observation or still remain uncertain; in the southeast the solid portions have been traced from the early maps and descriptions, while uncertainty is indicated by a broken line.

As a base for the geology the map of the U. S. General Land Office, edition 1892, has been employed, but it leaves much to be desired respecting accuracy, particularly as regards stream courses. No other maps of the region, however, exist, excepting the Hayden sheets in the southern part.

A GEOLOGIC RECONNOISSANCE IN NORTHWEST WYOMING, WITH SPECIAL REFERENCE TO ITS ECONOMIC RESOURCES.

By George H. Eldridge.

GEOGRAPHIC POSITION.

The area of Wyoming covered in this reconnoissance lies between meridians 106° 30′ and 109° 30′ W. and parallels 42° 45′ and 45° N.— about 150 by 150 miles, or 22,500 square miles. The examination, however, extended about 15 miles across the Montana-Wyoming line, making a total area of 24,750 square miles. (Pl. I.)

Four important towns lie within this region: Sheridan and Buffalo in the northeastern portion; Red Lodge, in Montana, in the northwestern; and Lander in the southern. Besides these, are two army posts: Fort McKinney and Fort Washakie, the former 3 miles west of Buffalo, the latter 16 miles northwest of Lander. Sheridan and Red Lodge have railroad communication with the East and West, the former by the Burlington route, the latter by the Northern Pacific Railroad.

In the southern part of the region is the reservation of the Shoshone and Arapaho Indians, in area 60 by 66 miles, or 3,960 square miles.

TOPOGRAPHY.

The topographic features of the region are two structural valleys, the Big Horn and Wind River basins, each nearly inclosed by high mountain ranges: the former basin, however, is separated from the country to the north by only a gentle rise; the latter from the valley of the Platte by a low divide of complex structure. The Wind River passes by a deep gorge in the Owl-Rattlesnake Range into the Big Horn basin, where it becomes the Big Horn River, flowing thence to the Yellowstone valley through one of the most rugged and impassable canyons of the West.

INCLOSING RANGES.

The Rocky Mountains.—The Rocky Mountains border the region on the west and southwest. Their eastern slopes are deeply cut by four large streams, Clarks Fork, Stinking Water, Grey Bull, and Wind

River. The general mass is divided into three subordinate ranges, Absaroka, Shoshone and Wind River.

The Absaroka Range extends from the Stinking Water, 50 or 60 miles south of the Montana-Wyoming line, northward to the Yellowstone River. It occupies the eastern portion of the Yellowstone Park Reserve and constitutes in part the watershed of the Yellowstone River, Clarks Fork, and the Stinking Water, but does not enter into the formation of the continental divide. The configuration of the range in the interior and more elevated portions is that of a lofty mass of castellated peaks and ridges and cliff-bound canyons, carved out of horizontal beds of breccias and conglomerates, while at lower altitudes and adjacent to the prairies the topography is characteristic of an Archean core, fringed by sedimentary formations dipping usually between 45° and 90° E. or NE. Occasionally, secondary parallel ridges skirt the base of the main range, the result of minor folding.

The Shoshone Range lies between the Stinking Water and Wind River valleys. It enters only slightly into the formation of the continental divide, but sends from it to the northeast and southeast two rugged and almost impassable ridges, that to the southeast being the more important. The spur to the northeast has the subordinate name of Meeteetse Mountain. Like the more elevated part of the Absaroka Range, this is a confused mass of castellated peaks and ridges in the breccias and conglomerates which extend southward from it; this configuration is maintained to the mountain front. A broad belt of low foothills succeeds, composed in the main of the remnants of early folds, parallel in trend with the range front and belonging to the transition zone between prairie and mountain structure.

The Wind River Range is one of the highest and most rugged segments of the Rocky Mountains. It has a general northwest trend, and extends from the Tukwatika[1] Pass to a point a little southeast of Lander, constituting for nearly its entire length the continental divide. The topographic aspect of the range is that of a great anticlinal fold with an exposed core of Archean rocks and a bordering zone of sedimentaries of more of less steep dip, reaching an altitude of 1,000 and 2,000 feet above the mountain base. The range is deeply cut by mountain streams, and across their canyon mouths may be observed in many instances the terminal moraines which mark the extent of early glaciers.

The Big Horn Range.—This is a lofty anticline about 100 miles east of the Rocky Mountains. The trend varies from N. 10° E. at the southern end to northwest at the northern, near the Montana-Wyoming line. The general altitude is between 7,000 and 8,000 feet, or 3,000 to 4,000 feet above the prairies to the east. Elevations between 8,000 and 9,000 feet, however, are frequently encountered, and the principal point,

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[1] *Tukwatika* or Tukwarika, "Mountain Sheep Eaters." This, according to Dr. Hoffman, of the U. S. *Bureau of Ethnology*, is the name of a band of Shoshone Indians. It has long been applied to the *pass in question*, but on existing maps is spelled "Twogwotee," a form not as acceptable as that *adopted in the text.*

Cloud Peak, reaches a height of about 13,500 feet. In topography the range is an instance of a broad, flat, anticlinal arch presenting an Archean core within sedimentary formations which dip more or less steeply from the center. The summit of the range is from 10 to 25 miles wide. The higher peaks, of crystalline rocks, occur midway its length, while beyond these the surface is undulating or studded with low buttes and ridges, the uneroded remnants of Paleozoic quartzites, limestones and shales. The drainage of the summit is peculiar in the long north and south courses pursued by the streams before they break through the rim to fall rapidly to the prairies below; this is due to the frequency of minor folds and faults running with the range, by which the early channels were directed. The scenic features of the Big Horn Mountains are remarkably beautiful. On the summit broad grassy parks exist in picturesque contrast with extended masses of heavy timber; and on the slopes of the range are wild canyons with swift-flowing torrents, broken at the rim of the upturned sedimentaries by cascades over hard Archean granites, the whole in the midst of boldest crags which tower high on the mountain face.

The divide between the Big Horn basin and the valley of the Yellowstone.—This is in the main low and developed largely by what may be termed the accidents of erosion, although primarily determined by a gentle anticline. At the eastern end the divide passes into the Pryor Mountains; at the western, into a projecting spur of the Absaroka Range. The trend is irregular, particularly in the middle section, where folding has been slight and erosion the chief factor in development. Five or six miles from the western end is the sharp double peak of Heart Mountain, an isolated hill rising from 1,000 to 1,200 feet above the general prairie level, and constituting a landmark visible from all parts of the basin and its rim.

The Pryor Range, at the eastern end of the divide, attains an elevation between 7,000 and 8,000 feet. Structurally it is the northwestern extension of the Big Horn Mountains, from which it is separated by the Big Horn Canyon and the valley in its immediate vicinity. The range is twinned by a northwest to southeast strike fault, the gentler slopes of both ridges being to the west. The northeast ridge is the greater, and a little distance from its northwestern end is cut by the gorge of Pryor's Fork. The southwest ridge terminates at the head of Sage Creek, a tributary of the Stinking Water rising opposite Pryor's Fork. The Pryor Range disappears at the north and west by a gradual sinking of its axis, but a large area of the country is maintained at a considerable elevation above the prairies along the Yellowstone.

The Owl and Rattlesnake Mountains.—These form the southern side of the Big Horn basin and separate it from the Wind River valley beyond. They extend from the Shoshone Range to the southern end of the Big Horn Mountains, the general trend of the chain being N. *50° to 60° W. The Owl Mountains* lie to the west of the Wind River *Canyon, the Rattlesnake Mountains* to the east.

The Owl Mountains have the appearance at their crest of a series of ridges diagonally placed with reference to the general trend of the range and rising from 400 to 500 feet above intervening depressions. This appearance is brought about by a series of anticlinal folds—possibly with an occasional fault—of which the trend is approximately northwest or slightly diagonal to that of the range as a whole. This structure is locally continued to both north and south slopes of the range, producing a series of subordinate ridges in a position en échelon with reference to one another. The altitude of the range is probably between 6,000 and 7,000 feet, or 2,000 to 3,000 feet above the general level of the valleys on either side. The southern slope is the more precipitous, the northern being gentle and deeply cut by canyons—a condition also existing on the southwestern or gentler slope of the Pryor Mountains.

The Rattlesnake Range unites the Owl and Big Horn Mountains. It is an anticline, with a precipitous slope to the south, the northern being gentle and considerably cut by erosion. Upon the latter slope the several members of the Cretaceous extend well up toward the summit rim.

The divide between the drainage of the Wind and Platte rivers.—This is low and is in part structural and in part the accident of erosion.

BASINS.

The Big Horn basin.—The topographic features of this area are mainly those of the well known "Bad Lands" of the West. The outcropping strata are clays and sandstones, the former predominating. Gray is the prevailing color, but white, purple, pink and black, in bands, also occur. The surface is a plain, relieved by buttes and ridges and by the broad bottoms of the larger streams and their tributary gullies. The configuration is the result of erosion, or of erosion combined with structure, the latter being the case in the numerous anticlinal ridges, from 1 to 30 miles in length, which occur within a belt of 5 to 15 miles along the inclosing ranges. Valleys now occupy the longitudinal axes of many of these folds and sharp incisions cross them. In the interior of the basin the ridges are more the result of erosion alone, and, with the buttes, occur without system; here, too, both ridges and buttes may consist wholly of clay, when they are sharp crested or pointed, or they may be capped by sandstone, becoming tabled. The height of the elevations is between 100 and 500 feet above the general bench levels, the stream bottoms being from 50 to 200 feet below. The general altitude of the basin is about 4,000 feet. Areas of great fertility exist about the periphery of the basin in the portions of the valleys occupied by the clays of the Montana Cretaceous. These tracts are often several miles in width and length, and in certain localities they are repeated two or three times from structural causes, increasing materially the total area available for agriculture.

The topographic features of the Big Horn basin extend across the divide to the Clarks Fork valley.

The Wind River basin.—The area from Torrey's Fork east is, with the exception of the bottoms of the main streams and a narrow zone along the base of the inclosing ranges, a barren waste of sand, clay and grit, relieved in configuration only by an occasional butte or the shallow depressions of its dry stream courses. Nearly all of its water is carried well toward the southern side, the Wind River Range affording almost the only supply. This edge of the basin has many fine streams and broad valleys, presenting large tracts of valuable agricultural land. Crow Heart and Pavillion buttes are the prominent landmarks of the basin. Thirty to forty miles above the former the valley begins to narrow, the topography of the Wind River Range prevailing to the head on the south, while on the north the Shoshone Range presents its bold cliffs and deep gorges carved in horizontal beds of breccia.

GENERAL GEOLOGY.

FORMATIONS.

The Archean.—The Archean consists of granites, gneisses and schists of various types. It forms the cores of the Big Horn, Wind River, Absaroka and Owl-Rattlesnake Ranges. The area of exposure varies in the different ranges, depending upon the conformation of the folds, the amount of reduplication, the degree of erosion, and the cover of late Tertiary conglomerates and breccias of eruptive material. On the summit of the Big Horn Range the Archean forms the bottoms of many beautiful parks, and towards the central portion of the range enters into the structure of the higher peaks. In the latter case it is cut by eruptive bodies of considerable importance. In the Wind River and Absaroka Ranges the area of Archean is very extensive, while in the Shoshone Mountains it is reduced to a minimum, if, indeed, there is a single exposure. The condition in the Shoshone Range is brought about by heavy deposits of eruptive breccias and conglomerates, which not only cap the highest peaks but extend in long ridges quite to the front of the range and prairie border. In the Owl-Rattlesnake Range, in addition to the main exposure, an independent outcrop of Archean occurs further to the west, induced by erosion of a sharp anticlinal fold or denudation along a possible fault line, in direction somewhat diagonal with the general trend of the range.

The Cambrian.—This consists of a series of shale, sandstone, grit, conglomerate and limestone, the shale and sandstone locally having the general composition and hardness of quartzite, and also containing a variable, though always small, amount of lime. The material at the base of the formation is usually coarse, constituting the chief conglomerate of the series; in many instances it is apparently derived from the neighboring Archean, but not infrequently there is found the white quartzite and quartz conglomerate so common in the Colorado areas of Cambrian, the source of which is possibly somewhat more distant. The color of the arenaceous or quartzitic members varies from darker brown to gray, white, or, locally, red or green, but the first predominates.

The shales, which are greenish gray or brown, constitute by far the larger part of the formation, the sandstones and grits being distributed from base to summit of the series, in beds 2 to 20 feet thick, in the Big Horn Range an especially prominent zone occurring about midway.

The limestones are impure and occur in thin beds at a few horizons only. The entire series contains disseminated grains of the green silicate of iron (glauconite) which is now recognized as characteristic of the Cambrian throughout the Rocky Mountain region.

The thickness of the formation varies from a few feet—with possibly entire absence in one or two localities—to about 900 feet, the region of minimum development being the Owl Mountains, that of maximum the canyon of Clarks Fork. On the eastern slopes of the Big Horn Range, in the canyon of Big Goose Creek, the estimated thickness is from 400 to 600 feet, which is maintained over the greater portion of this range.

The fossils of the Cambrian within the region examined are doubtless far more numerous than casual search revealed, but aside from a few trilobites no attempt at collection was made.

The Cambrian exposures are confined to the mountains. The formation occupies considerable areas of the summits of the Owl and Big Horn ranges, while in the Absaroka and Wind River Mountains it is confined to the lower slopes. On the summit of the Big Horn Range it forms numerous low buttes which rest upon the Archean floor and are usually capped by the lowermost strata of the Silurian.

The Silurian.—Overlying the Cambrian, the upper limit of which is somewhat arbitrarily taken at the top of the shales, are several hundred feet of limestone and quartzite in which it is difficult to trace a definite line of division but approximately the lower half of which is of Silurian age, and the upper half, Subcarboniferous. The Silurian series presents three varieties of rock: a peculiar, laminated, pebble-bearing limestone at the base, and light colored cherty limestones and white quartzites, overlying to the summit.

The basal limestone is from 50 to 100 feet thick. Some of its layers abound in lenticular pebbles, also of limestone, in size minute up to 1 or 2 inches in maximum diameter. The colors are green, greenish gray, purple or purplish brown. The layers devoid of pebbles are crystalline in texture and delicately laminated, the color changing with the laminations; their hardness also varies, causing the rock to weather in delicate corrugations. The matrix of the pebbly layers is similar to the above. The texture of the pebbles is homogeneous, the grain very fine; the prevailing color is green without, gray within. The pebbles lie both with the lamination planes and across them. Pebbles and matrix are of equal hardness, the rock fracturing across both alike. The presence of this series is general in the mountains bordering the Big Horn basin.

The nature of these pebble-limestones seems to be that of an intraformational conglomerate, the pebbles having been formed shortly after deposition of the original material by the breaking up of the bed, and settling in their new positions in the midst of fine calcareous matter brought down at the same time.

The chert-bearing limestones form the mass of the Silurian series. They occur in heavy beds of 50 to 100 feet and are white to light gray, mottled purple or brown. Locally they contain a varying amount of quartzose matter, by reason of which they not infrequently graduate into true quartzite, and vice versa. Limestones of this appearance and nature characterize the Silurian throughout the Rocky Mountain region.

The Silurian quartzites are usually pure white and of considerable uniformity of texture. In the region examined they are distributed throughout the chert-bearing limestone in beds from 1 to 30 feet thick, but in several localities in the Rocky Mountains concentration into one or two heavy beds has been observed.

The thickness of the Silurian over the field examined varies. In the Big Horn Mountains it is estimated at about 600 feet; on Clarks Fork at 1,000 feet; in the Owl-Rattlesnake Range there is marked diminution with, possibly, even total disappearance at one or two localities; in the Wind River Mountains a thickness of 1,000 feet is again attained.

Characteristic fossils were obtained from a layer within 75 feet of the probable top of the formation.

The area of Silurian in the Big Horn Mountains is little less than that of the Cambrian; the lower members of the formation, having escaped erosion, cap many of the buttes on the summit, while there is a general rim of both quartzites and limestones about the whole periphery of the crest. In the Absaroka Range the formation is chiefly confined to the lower slopes, extending to higher altitudes only to the south of Clarks Fork, and in the vicinity of the Stinking Water, where additional area of exposure has been acquired by the presence of minor folds parallel with that of the general uplift. In the Wind River Range the conditions of outcrop and exposure are relatively the same as in the Absaroka. In the Owl-Rattlesnake Mountains the Silurian area is not extensive except in the immediate vicinity of the Wind River Canyon, where erosion has been carried to a degree that has left it the superficial rock over much of the crest. In the Pryor Mountains the delineation of the Silurian was undetermined, but it doubtless appears in the canyon of the Big Horn River, and possibly just west of the fault line in the valley separating the two ridges of which the range is composed.

The Carboniferous.—This embraces both divisions usually found in *the West—the Subcarboniferous* and the Coal-measures.

The Subcarboniferous includes the upper half of the great Paleozoic series of limestones and quartzites of which the lower half has been described as Silurian. Not more than 50 feet above the horizon regarded as the probable base of the formation characteristic fossils are found, while the upper limits are equally well defined by a sharp change in sedimentation. The thickness of the series varies between 300 and 1,000 feet, the maximum being attained in the Absaroka and Wind River Ranges, the minimum and average occurring in the Owl-Rattlesnake Mountains and in the Big Horn Range respectively.

The mass of the Subcarboniferous is limestone, divided into two or three varieties. In the region of the Big Horn Mountains there are two: the upper, the typical, massive "blue limestone" of the Rocky Mountains; the lower, a bedded, white, quartzite-bearing limestone, resembling that of the upper portion of the Silurian. In the region of Clarks Fork Canyon in the Absaroka Range, the quartzite is at a minimum and the limestone, which is of a more decided gray than usual, occurs in two or three broad bands separated by 50 to 100 feet of thin bedded limestone of reddish hue. The whole series is locally more or less ferruginous, while the blue limestone proper is also frequently cavernous. The beds occur in either one or two pronounced benches or with the Silurian form an unbroken cliff from base to summit.

The distribution of the Subcarboniferous includes the slopes of most of the great ranges bordering the Wind River and Big Horn basins, and, within the latter basin, the central terrane of the Sheep Mountain anticline—a long, low ridge near the eastern side of the basin—and the crest of Heart Mountain, near the western end of the divide between Clarks Fork and the Stinking Water.

The Coal-measures of the Carboniferous are the most variable of the formations within the present field. The series is most complete along Big Goose Creek in the Big Horn Mountains where the following beds are present: at the summit, 60 to 80 feet of white sandstone, in two benches, a red layer of 5 or 10 feet between; for 130 feet below this, thin beds of limestone, quartzite and shale, all more or less noncontinuous and shading into each other; beneath this, 20 feet of limestone in thin layers, some of which are white and very pure, others brown and more or less quartzose; shales with narrow quartzites and limestone now succeed for 60 feet; finally, the lowest bed consists of 40 feet of deep red sandstone with a few very thin beds of limestone interlaminated. The last rests directly on the Subcarboniferous.

Of the foregoing series the most important bed, both from general occurrence and the determinative value attached to it, is the heavy sandstone or quartzite at the top. This forms the outer rim of the Paleozoic measures in all the lofty ranges about the Big Horn and Wind River basins, except the Shoshone. The remainder of the series between this and the blue limestone is not only very variable, but, as in the section at Clarks Fork Canyon, locally disappears. At many points, however, and in the Big Horn Range especially, the prominent red sandstones at the base are present, and afford a ready means for identification of stratigraphic horizons. In the Wind River Range the quartzite is present, but the general constitution of the Coal-measures differs from that elsewhere in having a greater proportion of shale.

The distribution of the Coal-measures follows that of the Subcarboniferous.

The Trias.[1]—This is represented wholly by the well known "Red Beds" of the Rocky Mountains—heavy bedded, bright red sandstones and conglomerates, the former often of fine, even texture and uniform color, the whole consisting of quartzose and other Archean-derived material and being somewhat ferruginous. The upper 50 to 75 feet are usually more thinly bedded and carry a few narrow bands of limestone, constituting a transitional zone, to the overlying Jura. The thickness of the Trias varies approximately between 300 and 1,000 feet.

The folding and erosion that have taken place in the localities of the subordinate anticlines which parallel the main ranges have exposed much greater and more numerous areas of the Red Beds than would have been shown under circumstances of greater regularity. As a consequence, therefore, the Trias not only skirts the base of the more lofty ranges in zones of greater or less width according to the degree of dip, but occupies considerable areas in the basins themselves. Prominent among these areas in the Big Horn basin are the Sheep Mountain and Five Spring ridges on the east, the southern extension of the Rattlesnake Ridge—a spur of the Absarokas—on the west, and the region along the northern base of the Owl-Rattlesnake Range, in which both minor folds and gentle dips on the mountain slope itself have added materially to the breadth of outcrop. Other localities in the basin where the area of Red Beds is thus considerably increased are the southwestern base of the Pryor Mountains, and the western base of the Big Horn Range both in the vicinity of the Big Horn Canyon and between No Wood Creek and the main range. In the Wind River basin, in the vicinity of Fort Washakie and the town of Lander, are two very prominent anticlines parallel with the Wind River Range at a distance of 12 to 15 miles from its base, and on the southern spurs of the Owl Mountains adjoining the Shoshone Range, in the northwestern portion of the Shoshone Reservation, are several other folds en échelon with one another where extensive exposures of Red Beds exist.

The Jura.[1]—This, so far as the evidence obtained indicates, is, within the region under examination, wholly of marine origin. The thickness is between 400 and 600 feet, which is approximately maintained over the entire area of exposure. Shales constitute the mass of the formation in which from base to summit occur thin beds of sandstone and fossiliferous limestone of types characteristic of the Jura in the Rocky Mountain region. Gray is the predominating color of the shales, but throughout the formation red, purple, yellow, slate and pink, in greater or less intensity, may be observed. At a number of localities a considerable amount of siliceous matter appears, in occurrence suggesting the action of hot waters.

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[1] In the text Jura *corresponds to Upper Jura-*Trias of map; Trias, to Lower Jura-Trias.

The sandstones are of slight importance. They are chiefly gray with a slightly greenish tint. The lower beds, however, are red, shaly, and transitional from the Trias, while near the summit are two of greater thickness, which, but for their tint and the overlying typical Jura shales, might be confounded with the Dakota.

The limestones are nearly all fossiliferous, and of the drab color peculiar to the Jura in the west. In thickness they vary from a few inches to 15 feet. Three or four in the lower 100 feet and one or two in the upper third of the formation are especially prominent.

The distribution of the Jura is approximately that of the Trias, the one succeeding the other in all localities.

The Dakota.—As elsewhere in the Northwest, this is essentially a formation of quartzose sandstone with a few minor layers of shale or clay which locally become somewhat carbonaceous or, perhaps, take on the nature of a fire-clay. The sandstone is gray, but usually tinged yellow, red or brown from the presence of iron. At the base of the formation is a layer of conglomerate in which pebbles and matrix are more or less silicified, a feature also characteristic of the formation in other parts of the West. Plant remains occur.

The thickness of the Dakota varies, but is generally less than 100 feet. In the region of Five Spring Creek, at the western base of the Big Horn Range, the formation is entirely absent, the black shales of the Benton resting directly upon the variegated clays of the Jura. This is, however, a local occurrence, and within 3 or 4 miles of the base of the range the formation reappears, first in a clearly recognizable layer hardly 6 inches in thickness, then gradually increasing westward until a general thickness of 50 feet is attained. The phenomenon is apparently one of nondeposition.

The Colorado.—The component members of the Colorado—the Benton and Niobrara formations—are grouped under one color on the map, their line of division being too indistinct to permit separation.

The Benton is a body of leaden gray and black shales carrying a few thin bands of limestone and numerous small, lenticular ironstones. The formation maintains the general features that characterize it throughout the West. Its thickness is between 300 and 600 feet.

The Niobrara consists largely of light gray shales, but it also carries some impure, shaly limestones, a characteristic sandstone locally developed, and an equally remarkable conglomerate in which the pebbles are of black chert—in one or two places mingled with more or less eruptive débris. The thickness varies from 300 to 800 feet.

The shales constitute a broad, light colored zone between the darker clays of the Benton and Pierre. In general they are soft, friable and earthy, but there are layers more especially associated with the local sandstones and conglomerates, which are of extremely close grain and of fine even texture, indurated in a marked degree, and which, though gray on fresh fracture, weather a characteristic milky white. They occur in bands from 1 to 3 feet thick.

The limestones are not of a pronounced character, but rather are calcareous layers of the shale, which are held together with greater tenacity than portions containing less lime. These layers are rarely over a foot or two thick, are very earthy and are usually of a fine texture. They contain numerous molluscan casts, poorly preserved.

The sandstones are white, stained yellow or brown from the presence of iron, and they carry an occasional ferruginous concretion from 1 to 3 feet in maximum diameter. They are especially well developed along the front of the Absaroka Range in the vicinity of Clarks Fork, here attaining a thickness with the associated conglomerates of 50 feet. There are apparently two horizons of these sandstones—one 200 feet above the base of the formation, another at the summit. The sandstones are either massive or divided into layers 1 to 6 feet thick.

The conglomerates have a matrix of sand, but the pebbles are chiefly black chert, averaging half an inch in diameter, in some places sparsely scattered through the rock, in others constituting almost its entire mass. Mingled with the chert pebbles are others of eruptive material; these are especially abundant in the vicinity of Clarks Fork. The pebbles of the Niobrara conglomerates, particularly those of black chert, are characteristic of the formation for the region examined and afford ready identification of the geologic horizon.

The sandstones of the Niobrara in the Clarks Fork region are leaf-bearing, affording the only instance within the United States in which this formation has been found to contain plant remains.

The Niobrara occurs not only in the regular succession of beds along the base of the several mountain ranges but includes numerous areas in the basins proper, where it occupies the center or rim of most of the subordinate anticlines about their peripheries. Notable among these anticlines are several along the west base of the Big Horn Range; others very extensive north of the Owl Mountains, having a N. 60° W. trend; a number in the region between Wood River and Stinking Water, of a general north-northwest direction; portions of the general divide between the Big Horn basin and the Yellowstone valley; and, in the Wind River valley, several along the Wind River Range, and others extending in a southeasterly direction from the Owl Mountains.

The Montana.—This embraces the Pierre and Fox Hills formations, which, by reason of their gradual passage one into the other, it has been impossible to separately delineate upon the map.

The Pierre is composed entirely of dark, leaden gray clays, which carry numerous concretions of limestone, averaging 2 to 3 feet in diameter. These concretions are often veined with calcite seams, and easily break into angular fragments; they are fossiliferous, affording many typical Pierre forms.

The Pierre outcrops over a much greater area than any of the older formations. This is due to the low degree of dip beyond the immediate base of the mountains, to the many gentle anticlines mentioned, and to the general level of erosion attained at the present day. In the Wind River valley broad areas of Pierre exist both on its northern and southern sides. In the Big Horn basin the Pierre occupies a broad belt along the base of the inclosing ranges, locally, however, as along the base of the Absaroka Range, contracted by reason of its steeper dip. East of the Big Horn Range the formation again occurs at a comparatively gentle dip, 10° to 20°; here, opposite the Laramie, its area of exposure is from 3 to 5 miles wide, while to the south of this formation it is reported over a much more extended stretch of prairie. The thickness of the Pierre is probably between 1,000 and 2,000 feet, but no actual determination was made.

The Fox Hills was not definitely recognized in the present field of exploration. Towards the top of the clays which constitute the Montana series the material locally becomes a little sandy, but no heavy beds of sandstones, such as mark its summit in many western localities, appear, and no fossils characteristic of the horizon were obtained.

The Laramie.—This is a series of alternating sandstones and clays, with seams of lignite or coal at various horizons from base to summit.

The clays as a rule predominate. They are gray, and often bear plant remains or carbonized particles of wood sufficiently abundant to stain layers of them a brownish hue, or to impart to thin beds a more or less lignitic character. They frequently carry concretionary bodies of indurated sandstone, and in a single locality—one mile below the town of Red Lodge, on Rocky Fork, in Montana—limestone concretions from 1 to 6 feet across, containing leaf and wood impressions. The latter concretions resemble those of the Pierre in texture and fracture, but are yellowish gray and are associated with lignite-bearing beds.

The sandstones are almost wholly composed of quartz grains, of medium size. The normal color is gray to white, but a variable amount of iron locally imparts a brownish tint. The beds vary in thickness from 1 to 50 feet, those of 20 to 30 feet being of common occurrence. They are of considerable persistence, particularly those of the lower 150 to 200 feet. As a rule the lower beds form prominent outcrops, whether their position is vertical or but slightly inclined. Leaf impressions are common.

The clays and sandstones of the Laramie in the Big Horn and Wind River basins and the Clarks Fork valley are segregated into two broad divisions: the lower, 300 to 500 feet, composed chiefly of the sandstones; the upper, 400 to 600 feet, of the clays. East of the Big Horn Mountains this separation is not nearly so pronounced.

The thickness of the Laramie varies from a few feet to 1,000, or possibly over. The maximum thickness is attained beneath the prairies east of the Big Horn Mountains, the minimum along the base of the

Absaroka Range immediately south of Clarks Fork, where but a few feet now separate the Pierre from the overlying Wasatch. At other points the average thickness of at least 600 or 700 feet is maintained. The extreme thinness in the vicinity of Clarks Fork is due to denudation from the summit prior to deposition of the younger formations.

The area of exposed Laramie is extensive. East of the Big Horn Mountains it reaches fully half of the distance to the Black Hills, while to the north and west it constitutes the surface formation over much of the Yellowstone and Clarks Fork valleys. It underlies horizontally the Tertiary formation in the central portion of the Big Horn basin, and outcrops with gentle dip in a broad belt about its periphery. In the Wind River valley it appears from beneath the later beds in detached masses at the base of the inclosing ranges, and probably underlies the greater portion of the basin area.

Succeeding the Laramie in chronological order in the Big Horn and Wind River basins are the equivalents of the Wasatch and Bridger formations of an area further south, with possibly a third series of beds belonging to the Livingston, a formation of recent identification in Montana The last has been assigned to the Cretaceous, while the first two belong to the Eocene Tertiary. Each at one point or another rests directly upon the Laramie, at the top of which is one of the greatest unconformities known.

The Livingston.—This formation, on account of its uncertain occurrence, will not here be discussed beyond the remark that in its recognized localities to the northwest of the present field it consists of a series of sandstones, grits, conglomerates and clays, made up very largely of the débris of andesitic lavas and other volcanic rocks and including local intercalations of volcanic agglomerates.[1]

The Wasatch.—This is a series of clays with occasional beds of sandstone and local conglomerates, the thickness variously estimated from 1,000 to 2,000 feet.

The clays are chiefly gray, but are banded white, buff and red, the reds being most conspicuous, and, taken with the composition of the beds and their stratigraphical position, a characteristic and determinative feature of the formation. Small calcareous concretions, more or less earthy, occur throughout the clays; these are fossiliferous.

The higher sandstones in the series are argillaceous and generally weather in slopes uniform with the clays. Occasionally, however, purer layers occur, which are more resisting and outcrop in ledges that break the otherwise monotonous descents. Towards the base of the formation the sandstones are usually more pronounced and the lower layers may become coarsely conglomeratic. This is especially the case in the vicinity of Clarks Fork Canyon, along the foot of the Absaroka Range, where there are 600 or 700 feet of conglomerates, grits, and sandstones, all more or less ferruginous. The pebbles constituting the conglomerates vary in size up to 6 or 8 inches in diameter, and consist chiefly of limestones, quartzites, and sandstones derived from the older sedimentary formations of the neighboring mountains; a small quantity of Archean débris is also present. Towards the top of the conglomerates or sandstones are intercalated thin beds of red clay, similar to, but passing with gentle easterly dip beneath, those so conspicuous further out in the basin. The conglomerates rapidly disappear to the south of Clarks Fork Canyon, but to the north continue beyond the Montana line, where, however, their relations to other formations were not investigated. In this direction, as the series is ascended, the material becomes finer, and the 5 or 6 miles of prairie along the Montana-Wyoming line next the range is chiefly occupied by grits and sandstones, with a minimum of the coarser constituents.

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[1] The Laramie and the overlying Livingston Formation in Montana, by W. H. Weed. Bull. 105, U. S. Geol. Surv., p. 21.

The beds which are here described as Wasatch have been studied jointly by Prof. H. F. Osborn and Dr. J. L. Wortman[1] with reference to their fossil mammalia. These have been found practically the same as those that characterize the Vermilion Creek beds of the Fortieth Parallel Survey, while lithological identity is apparent from the foregoing description. There is, therefore, no doubt as to the propriety of referring the series to the Vermilion Creek or Wasatch Eocene, the lowest division of the western Tertiary.

The Wasatch beds occupy a broad area in the central portion of the Big Horn basin. They have been traced and identified, both lithologically and by their fossils, in the Clarks Fork valley and northward to the Montana line, and they appear from beneath the lower Bridger beds in certain localities in the Wind River valley.

In the Big Horn basin they constitute the prominent McCullocks Peak, near the western edge of the formation, from here passing northward into the eastern spurs of Heart Mountain, and beyond into the bluffs of Pat O'Hara Creek and the hills on both sides of the Clarks Fork valley, in the vicinity of the canyon of the latter stream approaching within a half mile of the base of the range. South from McCullocks Peak, between the Stinking Water and Grey Bull, their western boundary lies at a distance of 10 to 15 miles from the base of the Shoshone Range. The formation appears in the high bluffs southeast of Meeteetse, and continues southward to the region of Twenty-one or Upper Cottonwood Creek, where its outcrop turns to the east and passes across the Big Horn basin on an irregular line 10 to 15 miles from the base of the Owl-Rattlesnake Range. East of the Big Horn River the series of clays again appears in a high ridge in the forks of this stream and No Wood Creek. The eastern line of the formation recrosses the Big Horn near the mouth of No Wood, and passes northwest approximately parallel with the Big Horn Range at a distance from it of 15 to 20 miles. The thickness of the Wasatch beds within this area is possibly between 1,500 and 2,000 feet.

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[1] Fossil Mammals of the Wasatch and Wind River beds, collection of 1891, by Henry Fairfield Osborn and J. L. Wortman. Bull. Am. Mus. Nat. Hist., Vol. IV, 1892, Art. XI, p. 81 et seq. Also Proc. Am. Phil. Soc., December, 1891, p. 139.

On the western side of the Big Horn basin, against the foot of the Shoshone Range, in the vicinity of the Grey Bull and Wood rivers, occur several isolated patches of Wasatch, consisting of sandstones, conglomerates, and red and gray clays, separated by erosion from the main body of the formation in the center of the basin. These remnants are probably nowhere over 100 feet in thickness.

In the Wind River valley the Wasatch clays appear to the west of the stage road from Embar to Fort Washakie, on both sides of the divide between Muddy Creek and Wind River. In the southern bluffs of this divide their outcrop passes eastward beneath the Bridger beds in the direction of Pavilion Butte. Their area in this valley was not determined, but they probably underlie much of the Bridger west of the Wind River, with a marked line of unconformity between.

The Bridger.—This formation consists of grits and sandstones, of which the material is largely quartz, with some feldspathic and other débris, derived possibly from an eruptive source, or perhaps from the Archean. The cementing substance of the grains is an opaque, white, siliceous material, apparently more or less characteristic of the formation as a whole, but less conspicuous in the sandstones than in the more gritty beds. The formation easily breaks down, and has been converted into a vast sand-desert over much of the area covered by it.

The identification of the beds with the lower portion of the Bridger to the south is based upon its fossil mammals, discovered and examined by Prof. Osborn and Dr. Wortman in the season of 1891.[1]

The extent of the Bridger in the Wind River basin is undetermined. A considerable area has been allotted to it on the map, but there have possibly been included in it other Tertiary divisions, some of which have been distinguished by the members of the early Hayden Survey.[2]

Volcanic breccias.—This great body of rocks is confined to the Shoshone and Absaroka ranges, and lies almost wholly beyond the present field. They will not be described in this paper.[3]

Quaternary.—These deposits in the Big Horn and Wind River basins and adjoining areas are limited chiefly to stream bottoms, the uplands being comparatively devoid of them. They are variable in areal extent, and no attempt to map them has been made.

The interrelations of the formations.—The Paleozoic measures are apparently conformable throughout. The Cambrian and Coal-measures show a marked variation in thickness, but this is probably one of ordinary nondeposition, and is not the effect of interformational erosion and unconformity. In the Owl Mountains the formations are locally thinner, and towards the west center of the range both Silurian and Cambrian are absent, the Carboniferous resting directly on the Archean; whether this is due to the presence of an Archean island of such height that the Subcarboniferous limestones were the first of the series that overlapped its summit, or to a possible fault which has brought these two formations into their present relations, was not satisfactorily determined.

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[1] Op. cit.

[2] Maps of the U. S. Geol. and Geog. Surv. of the Territories, F. V. Hayden, Geologist in Charge. Parts of Central Wyoming, and portions of Wyoming, Idaho, and Utah.

[3] For details of the composition and occurrence of these beds see Geological History of Yellowstone Park, by Arnold Hague. Trans. Inst. Mining Eng., vol, XVI, 1888.

Succeeding the Paleozoic measures, conformably and without apparent interruption among themselves, are the Mesozoic formations—the Trias, Jura and Cretaceous to the summit of the Laramie. Subsequent to the period of the Laramie, however, there follows a series of unconformities, chiefly by erosion, in which the later formations rest in broken succession not only upon one another but upon the several members of the Cretaceous as well. At many points evidence exists of the great amount of denudation that took place at the close of the Laramie—the Wasatch, for example, resting at one point on the lowermost strata of the Laramie, at another upon the Montana, and in a third locality even upon the Niobrara itself. In the latter instance, which happens just south of Sunshine in the high ridge separating Wood River from Gooseberry Creek, unconformity both by position and erosion exists, the Wasatch lying approximately horizontal across a sharp anticlinal fold in the Cretaceous series, the center of which is occupied by the Niobrara. With all the instances of unconformity, however, accidental conformity is often encountered.

The presence of the Livingston beds within the region explored has not been definitely determined, but this formation is strongly developed to the northwest, in the valley of the Yellowstone and the mountains to the north and south, and it is also reported by Mr. Arnold Hague north of the Stinking Water, west of Rattlesnake Ridge, where it rests successively upon all the older formations from Laramie to Carboniferous inclusive.

The Wasatch of the present area bears a certain lithological resemblance to the upper division of the Livingston as described by Mr. Weed,[1] which is composed of conglomerates derived from the older sedimentaries, and carries also beds of shales in which grays, purples, and reds occur. Mr. Weed himself suggests (p. 31) that some evidence exists that may prove sufficient cause for the separation of these conglomerates and silts from the Livingston and their recognition as the base of the Fort Union (Tertiary) group. It is therefore possible that in the absence of definite determination this series of conglomerates in the Yellowstone valley and vicinity corresponds with the Wasatch of Clarks Fork and the Big Horn and Wind River basins.

The Bridger, so far as observed by the writer, rests upon the Wasatch, except along the southern base of the Owl-Rattlesnake Range, where it apparently lies directly against the younger Paleozoic formations of the mountain, the border of the Cretaceous series being here buried beneath its sediments.

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[1] Op. cit., p. 30.

Regarding the statement of Dr. Wortman[1] that the ".Puerco and Laramie do not underlie the Wasatch in the Big Horn basin, but the strata rest upon the older sedimentary rocks," it is to be remarked that the itinerary of Osborn and Wortman shows a comparatively limited area of exploration, rendered necessary by the special object to be attained by them. A broader examination would have proved the general existence beneath the Wasatch of the Laramie, except in the localities cited in the preceding pages of this report. The Puerco is absent and the Wasatch does locally rest on older formations than the Laramie.

Dr. Wortman[2] also states that the Stinking Water cuts Wasatch strata clear to its mouth. Probably from the same cause as the last he has been led to overlook the occurrence of the Colorado, Montana and Laramie Cretaceous in the valley of this stream over a belt extending from the Big Horn River westward beyond the mouth of Sage Creek.

STRUCTURE.

The structural features of the region under consideration have been developed upon two lines of force, one of the general direction N. 70° E. S. 70° W., the other of a N. 30° E. S. 30° W. direction. Upon the former have originated the Absaroka and Big Horn Ranges; upon the latter the Wind River, Shoshone, Owl-Rattlesnake, and Pryor Ranges. The influence of the forces thus acting has extended over the entire region of exploration, as may be seen by the multitude of subordinate flexures, parallel to the larger, which occur far out towards the centers of the inclosed basins, and also on the prairies to the east. The action of the forces on the two lines was probably synchronous, their interference resulting in the connecting portions between the main uplifts.

The great mountain ranges of northern Wyoming are all primarily anticlinal elevations which have subsequently been modified by erosion, or, as in portions of the Rocky Mountains proper, by erosion followed by local deposition over their summits of an enormous mass of volcanic breccias now deeply cut by modern stream courses.

The Absaroka Range.—This includes the general mountain mass between the Upper Yellowstone River and the prairie to the east, and lies for the most part beyond the region of reconnoissance. Its structure is complex, but in general is that of a broad uplift having an Archean core fringed along the prairie front with a band of Paleozoic and later sedimentary formations. The latter are usually in a highly inclined position, dipping east or northeast from 60° to 90°. The harder

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[1] Op. cit., p. 144.

[2] Op. cit., p. 139.

(Paleozoic) measures constitute the mountain face, while the softer (Triassic, Jurassic, and Cretaceous) beds form a zone of varying width along its base. The steep dip of the strata at the edge of the mountains rapidly diminishes beneath the prairie, and usually within 1 or 2 miles of the base of the range is reduced to between 5° and 15°, the curvature generally taking place in the Laramie, but in some localities lower down in the Cretaceous series. The trend of the sedimentaries varies between N. 20° W. on the Clarks Fork front to N. 60° W. on the northern or Yellowstone front. Along the latter front, at the base of the range, is a fault by which beds of Laramie age occupying an approximately horizontal or slightly undulating position are opposed to others of Carboniferous age and highly inclined, the downthrow being on the north of the fracture.[1] At the turn in the range the fault possibly bends around to the south, but disappears before reaching the Montana-Wyoming line. South of Clarks Fork the Paleozoic strata extend with easy dip far into the mountains, and, as reported by Mr. Hague, form a portion of the south wall of the upper canyon of this stream.

Between Pat O'Hara Creek and the Stinking Water two important anticlines extend southeastward from the range at angles of about 20° and 40°, their axes gradually sinking beneath the prairie. The north fold lies at the greater angle with the range. On its southwest side the Red Beds and underlying Carboniferous dip 50° to 80° southwest; on the northeast a bold escarpment of Paleozoic limestones and quartzites is presented, suggesting a line of fracture along the axis of the anticline with the northern half somewhat depressed. The throw disappears at the general level of the foothills, which are here somewhat elevated, and the anticline itself is lost but a short distance from the base of the range in the ridge that separates the drainage of Pat O'Hara Creek from that of the Cottonwood, a tributary of the Stinking Water. The western end of the fracture was undetermined, but it is probably near the origin of the subordinate fold in the range proper.

On a direct line with the foregoing anticline, and about 5 miles east of the main range, is the isolated peak of Heart Mountain, the structure of which was but indefinitely determined. The peak, twinned by denudation, is capped with the quartzites and limestones of the Carboniferous, which dip 10° to 20° northeast and present abrupt cliffs on all sides. Along the southern side of the peak, 500 or 600 feet below the summit, are shales closely resembling the Jurassic, and which are here regarded as such. Their strike and dip are obscure, but they have a general appearance of lying horizontal or slightly inclined from the peak, while at one or two points considerable irregularity in their position appears. Farther to the south the Laramie strata appear with normal strike and dip. To the east and north of the peak the strata of the Vermilion Creek or Wasatch formation lie well up on the higher slopes, with a possible inner rim of the Jurassic between them and the Carboniferous. The Wasatch beds have a gentle dip to the northeast, an evidence of movement as late as Tertiary times. West of the peak the Laramie series pass uninterruptedly from the valley of Pat O'Hara and Skull Creeks to that of the Stinking Water and its tributaries, showing but few local irregularities of either dip or strike, the former being generally east-northeast. The relations between the Cretaceous and Tertiary formations and those entering into the structure of the peak itself are extremely obscure. The most plausible interpretation of the regional geology, however, seems to be that of an upward thrust, perhaps developed from extreme compression, by which the older beds, the Carboniferous and Jurassic, were carried through the surrounding formations of younger age, developing as it were between the two series of formations a practically circular fault, the strata in the immediate vicinity of which are in considerable confusion.

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[1] *This fault* was first observed in 1882 by Mr. J. E. Wolff, of the Northern Transcontinental Survey *Tenth Census Reports*, U. S., vol. x, p. 755 and opposite plate.

The southern of the two folds springing from the Absaroka Range forms an angle of about 20° with the trend of the main mountain mass, and is locally known as Rattlesnake Ridge. It is divided from the range proper for the greater part of its length by Rattlesnake Creek, which enters the Stinking Water just below the confluence of the North and South forks. The anticlinal structure is clearly shown in the Paleozoic measures on both sides of the ridge, while the canyon of the Stinking Water exposes the arch and the formations involved to the Archean. Between the northern anticline and the present, the strata form a sharp trough, the axis rapidly rising to the northwest. Both these folds spring from the main range at about the same point, and as their distance apart increases, the included angle shows other and subordinate folds, which are nearly parallel with the Rattlesnake Ridge. Of these, one of importance lies along the main fork of Cottonwood Creek, the present stream channel being a little east of the axis, the lowest beds exposed, the base of the Jura. The anticline extends the entire length of the creek, although the more pronounced portion, involving the Dakota and underlying formations, constitutes a sharp ridge 5 to 6 miles in length, considerably north of the Stinking Water.

South of the Stinking Water the Rattlesnake Ridge is continued in the knob-like peak of Cedar Mountain, which constitutes the southern end of the anticlinal fold in the Paleozoic measures. From this point southward the axis of the anticline rapidly sinks, but a crumpled structure is preserved in the Mesozoic formations underlying the prairie for a distance of 10 to 15 miles farther, quite to the valley of Grey Bull. The most important of these prairie folds commences just east of Cedar Mountain in the red sandstones of the Trias, which have not yet finally disappeared beneath the surface from the uplift of Rattlesnake Ridge; a short distance southeast the Red Beds are succeeded by the

Jura, and this in turn by the Dakota, Benton, and other Cretaceous formations to the summit of the Laramie, the fold showing conspicuously in each. This fold, together with one or two subordinate flexures, has an east and west extent of about 10 miles. The prairie thus included presents a series of low parallel ridges, inclosed valleys and isolated hills, the combined result of folding, erosion and the nature of the materials.

The region west of the Rattlesnake Ridge and north of the Stinking Water presents a number of crumples within a general synclinal depression, but little of the earlier mountain structure is shown, owing to the presence of the great series of volcanic breccias which lie unconformably across older formations and folds alike.

The Shoshone Range.—This embraces the great mass of mountains between the Stinking Water and Wind River and is the development of three distinct geologic incidents: a post-Cretaceous folding followed by a certain amount of erosion; deposition upon the area thus prepared of a heavy thickness of volcanic breccias and conglomerates which for the most part still retain their horizontal position; finally, erosion of later times, which has brought about the present configuration of the surface. So widespread is the deposit of breccias, however, that the earlier structural history is suggested only by the folds along the base of the range. These preserve a general trend of N. 30° to 60° W., S. 30° to 60° E., but local departures from this direction appear, however, as in the approximately east and west fold in the Stinking Water valley, and the north and south fold between Wood River and Grey Bull.

Commencing at the north, two anticlines occupy the northeastern slope of Meeteetse Mountain, crossing the heads of Sage, Carter, and Belknap creeks. One of these, the southwestern, has a N. 60° W. trend, with a lineal extent of 10 to 12 miles; the other, or northeastern, has a course a little nearer east and west and is somewhat shorter.

The crest of the former fold is exposed in strata of probable Laramie age at an altitude of 1,000 to 1,200 feet above the valley of the Stinking Water. The southwestern half of the fold, a short distance from the axis, becomes more or less obscured by débris from the mountain slopes above or passes into an area of broken and confused strata; at the few points, however, where clear observations are attainable, the dip of the beds along this side of the flexure varies from 20° to 80°. The northeastern half of the anticline is more regular, and the strata have a general dip of 25° to 30°, with a few, local, minor flexures. The anticline appears almost wholly in Laramie strata, but between the heads of Carter and Sage Creeks is a series of red, white and gray clays and yellow sandstones and conglomerates which closely resemble certain phases of the Wasatch. The stratigraphic relations of the two series of beds are, however, indefinite. This anticline disappears to the west in the valley of the Stinking Water; to the east in the slopes of Meeteetse Mountain at the head of Sage Creek.

The second anticline, northeast of that just described, lies along the base of the Meeteetse Range in the valley of the Stinking Water. It extends west nearly to Belknap Creek. To the east it enters the bluff of Carter Creek and is lost in the broad flat between this and Sage Creek. Transversely the fold is asymmetric, the strata on the southwest side having the steeper dip, 40° to 60°. North of the axial line the strata dip but 15° to 20°, and pass beneath the broad valley of the Stinking Water, to remain buried beneath the breccias of the Absarokas, or to reappear in the river bluffs or about the base of the Cedar Mountain and Rattlesnake Ridge. This profile of the fold therefore resembles that of the large anticline to the southwest. The crest of the smaller anticline is eroded to the Jurassic, while the highest beds on either side are now those of Niobrara age.

Between this anticline and that to the southwest there is a sharp syncline, so sharp, in fact, that it suggests the presence of a fault along a considerable portion of its length.

The structure beneath the valley of the Stinking Water, in the broad, triangular flat above Cedar Mountain, is doubtless that of a syncline modified by slight minor flexures, some of which appear in the bluffs on the north side of the river.

In the valley of Upper Sage Creek, between Meeteetse Mountain and the southern prolongation of the Rattlesnake fold, is a small anticline parallel with the Rattlesnake flexure, the northern end of which is within 5 or 6 miles of the Stinking Water, the southern in the high mesa separating Sage and Meeteetse creeks, the breadth of the fold being 3 or 4 miles. The fold shows a median ridge of Niobrara flanked on the east, across a valley of Montana shales, by a second ridge, of Laramie sandstones. West of the Niobrara ridge the area of the Montana is very broad, but the line between this formation and the Laramie is obscured by the structure about the immediate base of Meeteetse Mountain.

Between the anticline just described and that next east is a narrow synclinal valley, 1 to 2 miles wide, lying wholly in the Laramie shales and bounded east and west by the underlying sandstones of the same formation. The axis of the trough tilts up to the north of Sage Creek, and this end of the valley is also closed by a rim of the sandstones at the base of the Laramie. The southern end of the valley is closed by the Meeteetse mesa, in the sharp and eroded face of which the general structure of the trough is well exposed. The syncline is sharp, the sandstones on either side varying in dip from 45° to 70° or 80°. The details of the structure of the mesa between Sage and Meeteetse Creeks are obscured beneath wash and soil.

The Sunshine district.—In the southern face of the Meeteetse mesa, from a little above Arland Post-office to the mouth of Meeteetse Creek, strata of the lower Laramie are again exposed and show one or two broad, gentle anticlines, with a general trend of N. 40° to 50° W. and extending southeast beyond the valley of the Grey Bull. Additional folds also appear in the bluffs of the latter stream, a series of anticlines with the intervening synclinal troughs extending from the edge of the Wasatch below Meeteetse Creek to the base of the Shoshone Range, greatly increasing by repetition the surface area of the Laramie, Montana, and Colorado beds. These flexures are, again, connected with others south of the Grey Bull, extending to the vicinity of Gooseberry and Grass creeks. The region thus indicated is so united in its geologic development that it may be regarded as a district in itself and designated "Sunshine," from its central post-office and settlement on Wood River. The area of the district is approximately 25 miles square. The flexures which it embraces have a general trend of N. 30° to 50° W., varying locally N. to N. 80° W., but their distribution is more or less irregular, the result of general crumpling.

The front of the Shoshone Range bordering this district is a bold escarpment of volcanic breccias and interstratified lava flows, from beneath which at the prairie level pass the great series of Cretaceous clays and, perhaps, other beds a little above or below. The Montana and Colorado groups constitute a broad zone, 5 to 10 miles wide, at the base of the range. Locally these are overlain by patches of Wasatch which have been separated from the main deposit in the center of the basin. Areas of this Tertiary formation occur north of the Grey Bull, between this stream and Wood River, and capping the high lands to the south of the latter valley. These beds show comparatively little flexing, the great series of folds in the district being confined to the Cretaceous, upon which the Wasatch rests unconformably.

Two or three miles below the debouchment of the Grey Bull from the Shoshone Range a prominent anticlinal ridge appears in Niobrara beds, extending from a mile or two north of the river to five or six south, the trend being northwest. West of the ridge the Montana underlies the surface nearly to the mountain, local outcrops of Laramie being reported immediately beneath the eruptive series. These were not observed by the writer, but it is quite possible that they exist.

Passing eastward along the Grey Bull from this anticline, a broad stretch of several miles is crossed, underlain by the Montana. The Laramie first appears below Franks Ranch, 6 or 7 miles above the mouth of Wood River, where it caps a line of bluffs presenting a sharp face to the west. From this line, which is approximately north and south, the Laramie extends eastward in a synclinal trough, followed still further to the east by an anticline which occupies the residue of the region to Wood River. The northward extent of these flexures beyond Grey Bull is 5 to 6 miles. Southward they are continued to Gooseberry Creek, crossing the Wood River valley in the vicinity of Sunshine.

The syncline is marked by a broad topographic depression, with the rim raised considerably above the surrounding prairie. The center is occupied by the sandstones of the lower Laramie, which are chiefly confined to the region south of Grey Bull. The strata dip to the interior from 20° to 45° or 50°, those on the east and south having the steeper inclination; along the western rim the beds flatten considerably, forming a lip to this edge of the basin. In addition to the Grey Bull, the syncline is also cut about midway its length by a stream heading against the Shoshone Range. At the southwest corner of the area the Laramie measures are unconformably capped by the conglomerates and red clays of the Wasatch. The syncline derives special importance from the presence of coal seams of workable thickness and quality.

The anticline east of the syncline is chiefly exposed in the Montana, but the Niobrara outcrops for a few miles along the central portion of its axis. The fold appears in section in a hill a half mile north of Grey Bull, and again in the bluffs of Wood River near Sunshine. South of Sunshine it passes into the ridge between Wood River and Gooseberry Creek, where it is partially overlain by the conglomerates of the Wasatch. From this point it crosses Gooseberry Creek, a sharp flexure, and a little beyond becomes complicated by the presence of other folds, which extend into the higher foothills of the region further south, and probably eventually pass beneath the breccias of the Shoshone Range. Along the northern half of the fold Wood River occupies the broad belt of Montana shales east of the axis, while the Laramie appears in the high ridges east of this stream, crossing, however, to the west side a little above its mouth, and Grey Bull a little beyond. This outcrop of the Laramie is the western edge of the main body of the formation which now extends with a few local interruptions beneath the center of the Big Horn basin.

On Grey Bull, at the mouth of Rawhide Creek, another gentle asymmetric anticline may be seen in the basal sandstones of the Laramie. It extends north 4 or 5 miles, and south into the region between Wood River and Iron Spring Creek. East of this for several miles the bluffs of Grey Bull are occupied by the lower measures of the Laramie, the upper division of the formation—the lignitic clays—appearing just west of Meeteetse Post-office, while the lower beds of the Wasatch form the crest of the bluffs just below the mouth of Meeteetse Creek. The strata here dip gently east-northeast or northeast and gradually pass beneath the center of the basin. The rim of the Wasatch passes from the bluffs of Grey Bull with regular trend S. 30° E., a distance of nearly 20 miles to Gooseberry Creek, forming for most of the way a high prominent ridge with cliffs looking to the west.

In the hills south of the Meeteetse Post-office is one of the most prominent anticlines of the district. Its longitudinal axis, which has a general trend of N. 50° W., is from 15 to 20 miles long, its transverse, from 8 to 10 miles. The southern extremity is on Gooseberry Creek, at the mouth of Enos, where the axis has a local trend of N. 70° W. to conform with other folds of this vicinity. For 5 to 7 miles along the middle portion of its axis the anticline presents a deep topographic depression locally known as the Upper Buffalo basin. The basin is occupied by the Montana shales and is surrounded by a high and almost impassable wall of Laramie sandstones dipping outward at angles from 20° to 45°, the drainage being by a single sharp cut on the eastern side. About the sandstone rim, on the exterior, is the upper, or shaly, division of the Laramie. The hills at the southern end of the basin, just north of Gooseberry Creek, are exceptionally high, the basal sandstones of the Laramie outcropping in bold spires and rugged ridges.

East of the Upper Buffalo basin, and forming a portion of the general prairie region, is the extensive Lower Buffalo basin. This is not, however, a structural basin, but, rather, one of accidental erosion, common in regions where variation in the component materials of the beds is marked.

Six or seven miles southwest of the Upper Buffalo basin and 2 or 3 above the confluence of Iron Spring and Gooseberry Creeks is another anticline, of similar structure and topography. This is cut transversely by the valley of Gooseberry Creek, and shows a central body of Montana shales inclosed by a rim of Laramie sandstones dipping outward from 10° to 20°. The longitudinal axis of the fold has a north-northwest trend, and is, perhaps, 5 or 6 miles long; the transverse axis, somewhat shorter. This anticline is the first below the western rim of the Laramie, which crosses the stream valley several miles farther up, south-southeast from Sunshine Post-office. Still another anticline, smaller than the foregoing, crosses Gooseberry Creek at the mouth of Iron Spring, being well shown in the heavy sandstone walls of both stream valleys.

Within the area between Gooseberry and the Grey Bull, in the confusion of hills and valleys that there exists, several other folds in the Laramie were observed, all of greater or less importance, but detailed examination was not undertaken.

In the lower portion of the canyon of Gooseberry Creek, from the mouth of Iron Spring to 5 or 6 miles below Enos, and in the region to the south, the folding is of considerable complexity. For 3 or 4 miles below Iron Spring Creek the valley of Gooseberry is cut in the trough of a syncline. A little lower down the strata bend from the syncline to an anticline, and a mile below this, in the sharp point of land between the middle and east forks, another syncline follows, showing in a patch of Wasatch sandstones overlying the Laramie shales. On a small tributary of Gooseberry from the south, 2 or 3 miles east of Enos Creek, an important anticline, 4 or 5 miles in longitudinal extent and having a trend of N. 50° W., exposes at the center a small area of Montana, within a rim of Laramie sandstones carrying workable coal seams. Separating this from the southern end of the fold of the Upper Buffalo basin is a slight syncline, and on Enos Creek, halfway between the mouth and head, is a broader trough, in higher Laramie strata.

The entire region between Gooseberry and Grass Creeks is an area of many folds, some in continuation of those already described, others orginating within the hills themselves. East of this region the high foothills give way to the gentler and more regular ridges of the prairies, and the formations appear in succession from periphery to center of basin.

Grass Creek displays in its walls three or four more or less important flexures in the lower Laramie series, both above and below the point at which the stage road enters it from the north. Near the head of the valley the Wasatch appears, and on the divide between this and Twenty-one Creek, a tributary of the Cottonwood, the breccias and conglomerates of the Shoshone Range, in an eastward extension. The latter formation indeed covers a considerable area between this and North Owl Creek, capping the greater portion of the higher foothills which lie between these streams.

The Owl-Rattlesnake Range.—The system of folds to which this range belongs extends from out the Shoshone Mountains and connects them structurally as well as topographically with the Big Horn Range 80 or 90 miles east. The system includes the folds which constitute the mountain mass proper and numerous others parallel with these and occupying a broad belt of prairie on either side of the base of the range. The total width of territory thus embraced is not less than 25 or 30 miles.

The Owl Mountains topographically trend N. 70° W. Structurally, however, the range consists of a series of folds and, possibly, faults, which trend N. 50° to 60° W. or somewhat diagonal with the topographic trend, and this direction, N. 50° or 60° W., is that on which the geologic features of the entire region are developed. Four folds, or the faults into which they are possibly developed along a portion of their length, occupy the summit of the range, their axes being intersected about midway by the crest-line. Erosion along the axes has left in the intervals large blocks of Carboniferous limestones and quartzites, which cap the higher portions of the range.

Both sides of the Owl Mountains send out subordinate folds, in one or two instances but slightly less important than the main flexures. On the north side of the range, just east of the point where the stage road begins the ascent of the mountain, a sharp anticline is cut by the South Fork of Owl Creek, the general trend of its axis being N. 50° W. The lowest beds exposed are the Carboniferous quartzites. The fold extends but a short distance beyond the North Fork. Eastward along the range are several folds showing the Red Beds and underlying quartzites and conglomerates of the Carboniferous sharply cut by the stream courses to depths between 200 and 400 feet. Of these folds some end at the base of the mountain slope, others reach far into the basin. In the vicinity of the Wind River canyon other folds occur, with occasional small displacements along short fault lines. Through one of these flexures has been eroded, deep into the mountain, the gorge known as "Red Canyon," of which the walls are composed almost wholly of Triassic sandstones. The range itself, in the vicinity of the Wind River Canyon, is a simple anticlinal fold, of which the northern slope is very gentle, the southern, precipitous. The entire southern face of the Owl Mountains, however is steep, the strata on this side dipping from 60° to 90°.

South of the range several pronounced anticlines spring from the western third. Here three or four sharp flexures originating at the summit of the mountain rapidly succeed each other, corresponding synclines intervening. Their axes make an angle of about 20° with the trend of the main range, and sink more or less rapidly to the southeast, beneath the general valley of Wind River. The height of the ridges sharply decreases beyond the outcrop of Carboniferous quartzites, but the folds continue pronounced in the Jurassic and Cretaceous strata, far out from the base of the range. In the Niobrara the flexures show particularly well, the sandstones and harder shales of this formation constituting a sharp ridge between Benton and Montana shales, the latter underlying the broad valley of the Muddy and its tributary coulées. The region embracing the foregoing anticlines extends from a point in the range near the Embar and Fort Washakie stage road westward beyond the borders of the Shoshone Indian Reservation, and it is reported that flexures more or less similar occur nearly to the head of the Wind River valley.

Along the northern base of the Owl Mountains, within a belt of 10 miles, are many folds, all having an approximately N. 60° W. trend, some being confined wholly to the prairie, others extending a short distance into the range. From a high point opposite the confluence of the North and South Forks of Owl Creek, six anticlines are in view. Of these the most important extends across both Cottonwood and Owl Creeks, its axis intercepting the latter stream 10 or 12 miles below Embar. The linear extent of this anticline can not be less than 20 miles, passing to the northeast into the great body of Laramie strata between Cottonwood and Grass Creeks, and to the southeast into the lower Cretaceous and Jurassic beds of the lower slopes of the Owl Mountains. On the axis two low ridges of Niobrara are developed, one cut by Cottonwood, the other a little north of Owl Creek. The Niobrara ridges are surrounded by a broad expanse of Montana, and this in turn is inclosed on the north by a bluff of Laramie sandstones from 100 to 400 feet high. A smaller outlier of Laramie also caps a knoll a little southwest of the southern of the two Niobrara ridges, the strata forming a shallow syncline.

Northeast of the foregoing anticline is a second, a shallow syncline, 5 or 6 miles broad, intervening. The flexures show particularly well in the edge of the Laramie, which for several miles forms a wavy line in and out about the northern portions of the folds. A general easterly trend is, however, preserved for this edge of the formation, which, after one or two additional flexures just west of the Big Horn River, crosses this stream and pursues its course 15 or 20 miles further east.

Opposite the confluence of North and South Owl Creeks, about midway between the large anticline first described and Embar Post-office, is another sharp anticlinal fold, also showing a low ridge of Niobrara for some distance along its axis. This anticline disappears a mile or two north of the stream, but to the south passes into the lower slopes of the range a distance of 5 or 6 miles. Southwest of this is still another small anticline, again with a small Niobrara exposure at its center.

In the region of the Red Canyon, and extending along the lower slopes and foothills of the range for several miles in either direction, is a broad, N. 70° W. fold, with nearly the whole series of Triassic Red Beds exposed at the center, in the canyon walls. On the outer or northern slope of the fold the canyon creek has also cut a broad expanse of Jurassic sediments, affording an exposure visible for many miles.

Owing to these folds, the strata along the base and on the lower slopes of Owl Mountain display considerable irregularity of outcrop. In general, however, the Red Beds extend for a distance upon the slopes of the range. The Jurassic measures lie at the immediate base or, by a fold, extend a short distance prairieward. The Dakota and Benton often form a line of low knolls or ridges just without, while the Niobrara occurs both along the front of the range and, by folding, in numerous ridges out in the basin; the Montana follows, and beyond this are the long bluffs of the Laramie and Wasatch sandstones.

South of the Owl Mountains and east of the Embar and Fort Washakie stage road and the region of anticlinal spurs given off from the western end of the range, are several flexures, extending along the front of the range a distance of 15 to 20 miles and embracing the formations from Trias to Laramie.

The first anticline encountered extends east from the Mail Camp for several miles, at a distance from the range of one-half to three-fourths of a mile, its axis being coincident with the center of a prominent Niobrara ridge. Between this and the mountain is a sharp syncline, while without, another separates it from a second and parallel anticline, 3½ to 4 miles south.

The second anticline appears in the Montana and Laramie formations. Its length is probably between 10 and 15 miles, the strata forming a low ridge most of the distance. The western end of the ridge is indented by erosion of the beds along the axis of the fold to a horizon low down in the Montana. North and south of this indentation are conspicuous promontories, formed of the portion of the Laramie still preserved, the strata showing slight synclinal flexures. The area north and south of the promontories is occupied by Montana shales. The heavy Laramie sandstones in the southern promonto are continued eastward for 10 or 12 miles in a prominent bluff, 200 to 300 feet high, overlooking a broad, shallow depression in Montana, to the south. Around the eastern end of this depression the sandstones bend with one or two changes in dip, the most important showing the end of a gentle syncline which has a general east to west trend and a length of 10 to 15 miles, the axis being crossed by the stage road between Embar and Fort Washakie about 12 miles from the base of Owl Mountains.

South of this syncline is the final anticline observed in connection with the Owl Mountain system. It occupies the ridge dividing the drainage of Muddy Creek from that of Wind River, and has for its central formation the Niobrara shales and sandstones. It is a sharp crumple, the length of which is about 15 miles. At the western end it merges with the folds which spring from the western end of the Owl Mountains. The folding of this region has apparently extended to the Wasatch strata, a slight local dip to the southwest occurring in them at one or two points.

The Rattlesnake Range is the structural continuation of the Owl Mountains. It is in general a broad anticlinal uplift, with steep southern and gentle northern slope. It unites with the Big Horn Range, apparently by gradual change in axial trend, but the region of their union was not visited.

On the south side of the general fold, for some distance east of the Wind River Canyon, the Paleozoic measures dip from 60° to 90° south. Along portions of this front of both the Owl and Rattlesnake mountains erosion has removed the Carboniferous and underlying formations nearly to the prairie level, while the Mesozoic beds, which further west occupy a broad superficial area at the base of the range are, in the vicinity of Wind River, concealed beneath deposits of Tertiary age. Several miles east of the Wind River Canyon the Carboniferous and older strata entirely span the range, while even the Cretaceous beds locally reach well towards the summit.

The north side of the Rattlesnake Range presents an even, gentle slope, with a minimum amount of subordinate folding; but in a belt about 10 miles wide along the base of the range, especially in the valley of the Big Horn River and its tributary, Kirby Creek, several important flexures were observed together with an occasional fault.

Passing down the Big Horn River from the base of the range, the strata dip gently northward for a distance of 2 or 3 miles, the formations succeeding each other to a horizon a little above the base of the Montana, the Red Beds forming a prominent ridge next the foot of the mountain. Within a mile or two of the Hot Springs, the dip changes to the south and at the springs the axis of an anticline is encountered, the trend of which is approximately N. 75° W. The fold forms a prominent ridge for 10 to 15 miles along the front of the Owl-Rattlesnake Range, the Big Horn River cutting it about one-third the distance from the western end. The center of the anticline is occupied both east and west of the river by the red Triassic sandstones. The flexure in these is very sharp and the rocks are extensively cracked, the copious waters of the present hot springs finding their way through some of the still open fissures. The largest of these springs is fully 25 feet in diameter, with an unmeasured and possibly unmeasurable depth. The Jura, Dakota, Benton and Niborara succeed one another in regular order no the flanks of this anticline, and at the ends close around and over the formations lying within.

Between the Hot Springs anticline and Kirby Creek, 6 or 7 miles north, several other east and west flexures of greater or less importance occur in middle Cretaceous clays, but the details of their structure and their interrelations were not examined.

North of Kirby Creek the Laramie sandstones form a line of bluffs extending east from the Big Horn River for 15 miles. Ten miles out the bluffs are doubled by a strike fault, which is 4 or 5 miles long and ends to the east with the bluff line. The displacement along the fault is about 300 feet, the strata to the south being downthrown. East of the line of bluffs a gentle anticline appears, involving both upper and lower divisions of the Laramie and the Montana. The area embraced by the fold is very extensive, and is one of the most broken, topographically, in the entire Big Horn basin. The Laramie sandstones and shales, with their slight dips, have been eroded into innumerable and labyrinthine gulches, utterly devoid of water except in the winter or in a cloudburst in the summer. The whole region about, from the Big Horn to No Wood Creek, is intensely barren and parched, and is considered almost impassable.

Down the Big Horn the formations preserve considerable regularity of dip, but about 8 miles above the mouth of No Water Creek, in the bluffs east of the river, the axis of a broad syncline is passed. North of it is a low anticlinal arch, this in turn being succeeded by another syncline. The trend of these folds is more to the northwest than those nearer the base of the Rattlesnake Range, holding a position intermediate between the Owl-Rattlesnake and Big Horn systems of flexures.

The Big Horn Range.—This is structurally a broad anticlinal fold, the general trend of which is, for the southern half, north to south, to the north of this veering round to N. 20° W., and finally, as the Montana line is approached, to N. 40° W. In the Pryor Range—the structural continuation of the Big Horn—the trend is N. 60° W. A cross section of the Big Horn fold shows it to be asymmetric, but the steeper inclination of the strata is now on one side of the range, now on the other. In a profile west from Sheridan the gentler slope is to the east, the strata dipping but 35° or 40°. On the west the dip passes sharply from 25° or 30° on the higher slopes of the range to vertical on the lower with, possibly, even local faulting. Toward the Montana line the dip on both sides the range shallows considerably, on the west diminishing to but little over 20° and, locally, even below this. From the region of Shell Creek south the dip on this side the range again decreases to between 20° and 30°, and this, so far as observed, holds to the southern end of the fold. On the opposite or eastern side of the range, for a long distance south of Fort McKinney, the strata are nearly vertical. Thus the force which brought the range into existence, or the resistance opposed to it, seems to have been unequally distributed along the length of the fold, the effect being greatest now on one side, now on the other. The Big Horn anticline is a comparatively flat-topped flexure, the distance from base to base of the present range as limited by the harder (Paleozoic) formations being about 50 miles, and the general elevation above the prairie approximately but 5,000 to 6,000 feet. This, with 2,000 to 3,000 feet added for erosion of the Paleozoic strata from the summit, would increase the original height to between 7,000 and 9,000 feet, or considerably below the ratio of 2 to 50. But the topographic range of to-day is of considerably less area than that of the original fold. From the Carboniferous quartzites at the present base of the range outward, on both sides, the fold is continued in the Mesozoic measures, with diminishing dip, in some localities a distance of 10 to 15 miles.

In the development of the general fold of the Big Horn Mountains a considerable number of subordinate flexures came into existence both in that portion which constitutes the present topographic range and in the region along its base. In the range itself several flexures are shown in transverse section in the Paleozoic beds upon the slopes and crest, particularly east of the median line, in the canyon walls of the present stream courses. Folding of this nature has taken place over the entire length of the range, but the linear extent of the individual flexures is rarely greater than 5 or 10 miles. Conspicuous among the observed flexures on the eastern face and crest of the range are: one 4 to 5 miles long cut by the canyon of Wolf Creek, showing particularly well in its northern wall and occupying the slope of the range; a second in the canyon of Little Tongue River; a third, several miles in extent, on the summit of the range west of Dayton, the axis of which lies in a longitudinal valley just within the outer or easternmost line of crests, and which is crossed by the Bald Mountain trail a mile or two after reaching the summit; a fourth, southeast of the latter, of still greater extent, also just within the outer line of crests; a fifth on a branch of Pass Creek, which now flows along its axis. On the western side of the range, in the vicinity of the Bald Mountain trail, only a few minor and very gentle flexures exist, confined to the more horizontal portion of the strata on the higher slopes. On the Canyon Creek trail, several miles south of Cloud Peak, and along the range to the south of this, both east and west of the median crest line, are several slight undulations, hardly sufficient, however, to give local character to the crest.

In addition to the folds, strike faults, usually of comparatively slight throw—between 200 and 500 feet—are quite numerous, especially on the summit of the range within the first or outer rim. . Not only have these caused a reduplication of the strata and the area occupied by them, but to the fracture lines and the folds are often due the long north and south courses within the range peculiar to so many of the streams. Just north of Canyon Creek, on the west side of the range, a prominent east to west fault crosses the Carboniferous quartzites and limestones, by which a sharp bluff of several hundred feet is created by the elevation of the beds north of the fracture. This bluff overlooks the range to the south and constitutes from this direction a most noticeable landmark.

The Big Horn Mountains present a massive granitic core, which is exposed at the summit of the range over a maximum width of between 20 and 30 miles. Remnants of the Paleozoic shales, limestones and quartzites are left here and there upon the Archean, forming buttes from 300 to 500 feet high, the strata showing but moderate dips in any direction. Toward the periphery of the crest the area of the early sedimentaries rapidly increases, and at the rim all are complete. In the central or Archean area large bodies of eruptive rock and also dikes of the same material were observed, the former constituting many of the prominent peaks; whether all, however, are of eruptive material, was not determined by the writer, their mapping as such being based upon reports of members of the topographic corps of the Geological Survey. Flanking the range at either base are the Triassic Red Beds (here and there constituting a low ridge), the Jura, the Dakota (occurring locally in sharp, comb-like exposures), the Benton, Niobrara, Montana, and Laramie. The Niobrara also locally forms a slight ridge separating the two Cretaceous formations of shale, while the Laramie often outcrops in low bluffs capping slopes of Montana shales.

The anticlines of the Big Horn basin that belong to the present system of folds are: two in the northeast portion, at a distance of 10 to 12 miles from the base of the range; and a complex to the south, along the valley of No Wood Creek, from 3 to 5 miles from the base. The latter is parallel with the range, but the axes of the others lie a little more to the northwest than the axis of the range. These folds constitute the Five Spring Ridge, Sheep Mountain, and the Bonanza Ridges, the first being the northernmost. The Five Spring Ridge and Sheep Mountain have a position en échelon with each other, while the Bonanza complex is nearly in line with Sheep Mountain, with a possible slight offset to the west. Together these folds extend nearly the entire length of the Big Horn Range.

The Five Spring Ridge extends from the Stinking Water valley south to the vicinity of Salt Creek. The exposed core of the anticline is of Triassic Red Beds, which outcrop for 8 or 10 miles of its length and near the southern end are cut transversely by the Big Horn River.

The section at this point shows an asymmetric fold, the westerly dip being 15° to 20°, the easterly 45° to 60°, the present elevation above the surrounding prairie 300 to 400 feet. On the east the Jurassic, and Cretaceous formations to the Montana succeed in turn the Red Beds, the Montana entering into the fold but slightly. West of the ridge, for some distance along the middle portion of its length, the younger measures have been eroded, leaving only the gently dipping Red Beds, which, after occupying a slight depression between this and the Sheep Mountain fold, pass directly into the latter, with, possibly, a small intervening fault. To the north and south the younger formations close around those lying within, the axis dips in both directions beneath the prairie, and the fold gradually disappears.

The Sheep Mountain anticline has a like trend with the Five Spring and overlaps it on the west for several miles. The distance between the two axes is about 4 miles. The Sheep Mountain fold extends from near the Stinking Water valley to a little beyond Shell Creek, although the elevated ridge which marks its median line is somewhat shorter than the extreme length. The flexure is sharp and for much of its length asymmetric, the easterly dip being between 60° and 80°, the westerly somewhat less. The ridge formed by the anticline has a maximum height of 500 or 600 feet; this in the vicinity of the Big Horn River, which cuts it transversely about midway. The cut exposes in its walls a central body of Carboniferous limestones and quartzites, that also extend along the crest and slopes of the ridge 5 to 10 miles north and south of the stream. Beyond this the topographic ridge consists of the softer Triassic and overlying beds, and has been eroded to a height usually less than 300 feet. The fold finally disappears in the Pierre shales.

The effect of the Five Spring and Sheep Mountain anticlines has been to greatly enlarge the areas of exposure of the formations involved, particularly those of Mesozoic age; to increase their line of outcrop to more than twice that under ordinary conditions; and, in the case of the Laramie, to throw the main line of its coal-measures far to the west—in some localities 10 to 25 miles from the base of the Big Horn Range. Both the Five Spring and Sheep Mountain folds are clearly visible from the western edge of the Big Horn basin, 60 to 70 miles distant.

The Bonanza complex of anticlines extends from a few miles north of No Wood Creek nearly to the head of this stream, a distance of 50 miles. The general system of folds is parallel with the Big Horn Range and occupies a belt from 5 to 10 miles wide along its base. Some of the folds appear in the Colorado and Montana, while others, nearer the range, occur in the Dakota, Jurassic and Triassic formations. The anticlinal axes vary in length from 10 to 30 miles, and the east and west slopes of the folds are usually between 20° and 40°.

Passing up No Wood Creek, the first important flexure is crossed 4 or 5 miles above the mouth of the stream, the axis having a N. 25° W. trend, the fold being in Middle Cretaceous shales.

East of this 2 or 3 miles, and separated from it by a narrow syncline, is a second anticline in Niobrara and Benton shales. This also trends N. 25° W., and extends from a point several miles north of No Wood to one 7 or 8 miles south of Bonanza, where it merges into other folds. The axis of the anticline passes east of Bonanza, the strata being thrown into a prominent ridge 200 to 300 feet high, which is more or less eroded on the west.

One mile west of Bonanza is the axis of a third parallel anticline. This appears several miles below Bonanza, and extends beyond it, to the south, between 15 and 20 miles. The axis of the anticline is occupied along its middle portion by the Niobrara, in the shales of which opposite Bonanza a petroleum spring occurs.

Twelve miles south of Bonanza a fourth and very large anticline occurs, the strata exposed along the axis being the Red Beds. Other folds of considerable prominence were observed still farther south. The folds of this entire complex are all more or less intimately related, the synclinal troughs usually being narrow, the anticlines sooner or later merging into one another. The entire area of this complex is, indeed, one of much crumpling.

The anticlines between the foregoing and the Big Horn Range occur in the lower Mesozoic formations, but were not examined in detail by the writer.

The Pryor Mountains.—These are structurally the northwestern continuation of the Big Horn Range, extending from the Big Horn River, south of the Montana-Wyoming line, some 30 or 40 miles west-northwest, into the State of Montana. The range belongs to the N. 60° W. series of flexures, or to the same system as the Owl Creek Mountains and the Wind River Range.

Though excellent exposures occur in the Big Horn Canyon and on the slopes of the mountain above, a transverse section of the range was observed only at a distance, from points to the southeast and southwest on the general route of reconnoissance. The range is an anticline, but has a double crest, induced by a longitudinal fault along the western slope of the fold. The fault passes along the valley between the two crests, the strata on both sides the fracture dipping southwest about 30°, those on the east being downthrown. Southeast the fault probably does not extend beyond the Big Horn Canyon; northwest it disappears at the head of Sage Creek, beyond which the range is single, a continuation of the eastern of the two ridges.

The formations which constitute the Pryor Mountains are of Paleozoic and Archean age, the latter exposed in the canyon of the Big Horn River. The Mesozoic formations—the red sandstones of the Trias and overlying series—have been eroded to the base of the range both on the north and south, and from between the crests they have disappeared except a few scattered outcrops. The backs of both ridges consist of the Carboniferous quartzites, which in the western ridge particularly, have been deeply channeled with sharp canyons that diagonally cross dip and coincident topographic slope. The extent of the Pryor fold is considerably greater than the area of the range itself. The Trias, Jura, Dakota and Benton, outcrop along the base of the mountain, continuous with the outcrops farther to the south. Their dip in the Big Horn basin is usually below 15°, shallowing still further as distance from the range is gained. The formations appear, therefore, in wide terranes, the Laramie lying well out in the valley of Sage Creek. Moreover, the area of Laramie has been further diminished by a gentle rise of the strata along a portion of Sage Creek and their removal from the arch by erosion.

The Pryor Range disappears to the northwest by a gradual sinking of its axis. The region about, however, for a long distance is maintained at a considerable elevation and shows numerous minor folds, spurs of the main flexure or crumples of a secondary character but of synchronous development.

The divide between the Big Horn basin and the Yellowstone.—One of the minor folds given off from the western end of the Pryor Range is the gentle anticline which now forms the divide between Sage Creek and the tributaries of the Yellowstone. The trend of the fold is nearly east and west, and along the axis Bridger Creek, a confluent of Clarks Fork, has cut a deep canyon, walled in with Dakota, Jurassic and Triassic formations. On approaching the valley of Clarks Fork a number of irregularly disposed folds or crumples are locally developed in the Mesozoic beds, but beyond, the strata resume a gentle north and south dip which continues with undulations to the Yellowstone on the one hand and to the Stinking Water on the other. Toward the southwest a gentle fold in Laramie and Wasatch strata forms the remainder of the divide to Heart Mountain. In the vicinity of this peak and also west of Clarks Fork these flexures blend with the north and south system of folds developed with the Absaroka Range.

In the foregoing description so much of the Big Horn basin has been considered as is structurally peculiar. Within the zone thus defined about the periphery of the basin—that is, towards the center of the depression—the strata have undergone hardly more than an occasional flexure, and the formations occupy a practically horizontal position.

The Wind River Mountains.—These were observed only from the north. On this side, the range appears as a massive body of Archean, with a belt of Paleozoic measures at the base. The general trend is N. 60° W., and the sedimentaries dip from 30° to 80° north-northeast, locally reaching the vertical. The fold is apparently a simple anticline. The Carboniferous quartzites, which form the slope of the range for 1,000 to 1,500 feet above the base, are somewhat thicker than in the other mountain ranges examined, and, moreover, are accompanied by a series of shales not elsewhere encountered. The blue limestone is also heavily developed. The Silurian appears about as in the Big Horn Mountains, but the shales of the Cambrian are less conspicuous. Terminal moraines occur at the entrances to the many canyons. Prominent among these is one across the mouth of the canyon of the South Fork of Wind River. This is from 400 to 500 feet high and between 1 and 2 miles broad at the summit, covering a considerable area of the older Mesozoic formations. Existing glaciers also are reported on the higher peaks of the range.

Within a zone of 10 to 15 miles along the base of the Wind River Mountains, from the vicinity of Fort Washakie east, there are several prominent anticlines, some of which are of special interest from the presence of petroleum springs along their axes. The two most important have been referred to by others as the Shoshone and Washakie anticlines.

The Shoshone anticline is the most western. It has a N. 50° W. trend, and a length of 12 to 15 miles, the center being opposite Fort Washakie and 2 or 3 miles north of it. The western end lies in the vicinity of Sage Creek, 7 or 8 miles northwest of the fort, while the eastern is at an equal distance east-southeast of this point. The strata north of the axis dip 15° to 20°; south of it, between 45° and 80°. The center of the anticline is occupied by the Red Beds, which, besides forming the bottom of a valley 2 or 3 miles wide, also constitute its rim. The valley is cut transversely by the Little Wind River, and appears therefore as an amphitheater on either side of the stream, extending 4 or 5 miles to the west of it and 1 or 2 east. The Jurassic and Cretaceous measures lie about the Trias in successive outcrops, the Montana shale constituting the valley bottom between the anticline and the base of the Wind River Range. The Laramie measures have been deflected to the north or northeast by this fold and are seen outcropping in the low bluffs to the north of Lower Sage Creek at its confluence with Little Wind River. The western half of the anticline has been considerably denuded by the drainage of Sage Creek, and from this cause and from the presence of one or two minor folds, the lines of outcrop are somewhat irregular. The eastern end of the fold is a prominent ridge 100 to 200 feet high, composed of the Niobrara, and encircled about the base by the Montana shales. The axis of the fold is at this end slightly deflected to the east, towards the Washakie anticline 6 or 7 miles off. The center of the Shoshone anticline displays an important petroleum spring, a mile or two west of the channel of Wind River, and a very large hot spring in close proximity to the stream.

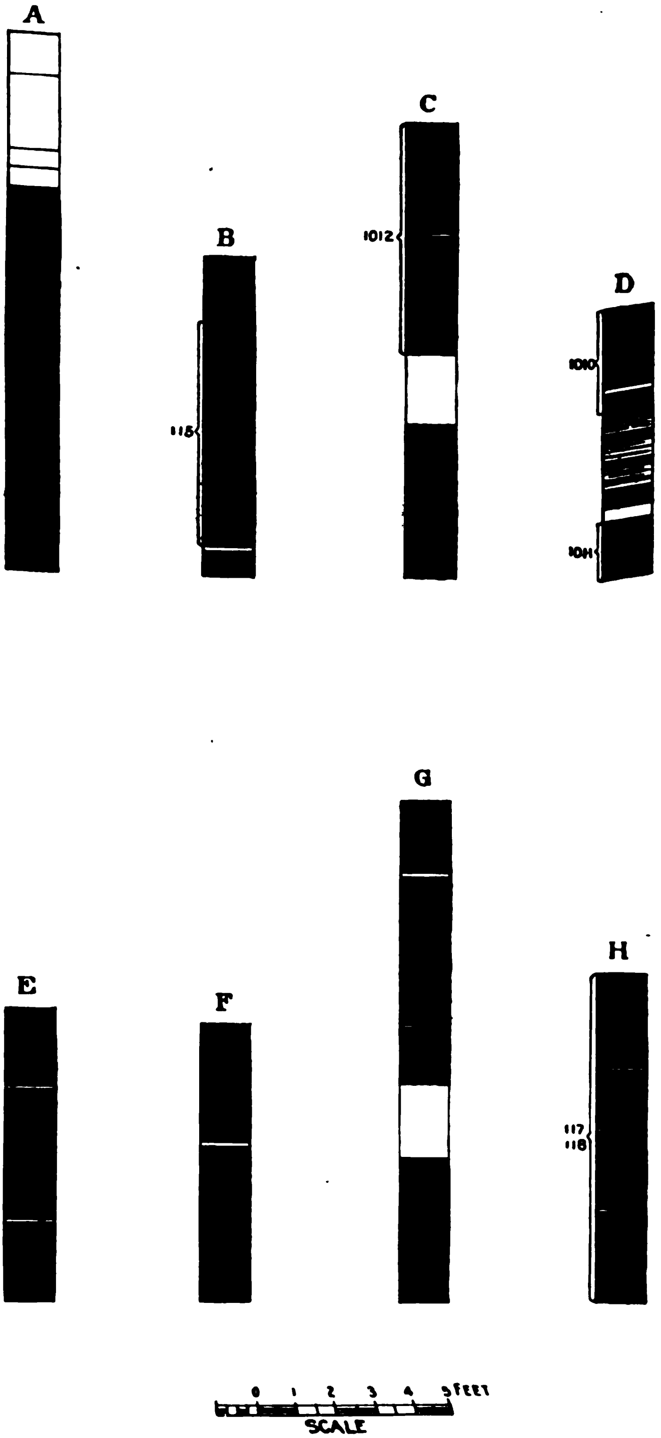
The Washakie anticline lies about 7 miles southeast of the Shoshone, the northern end of the former overlapping a little the southern end of the latter. Where confined to the Montana shales the fold does not appear above the general level of the prairie, but the Niobrara and underlying beds form a prominent ridge which extends from the point above mentioned southward to the head of Twin and Beaver

Creeks. Below Lander the anticline is cut transversely by the Popoagie, and again several miles to the south by its branch, the Little Popoagie, the latter stream now occupying its axis to the forks of Twin Creek. From the Popoagie south, far beyond Dallas, the central rocks exposed are the Red Beds, which along Little Popoagie are eroded to a depth of several hundred feet, forming lofty cliffs east of the stream and others less lofty west of it. North of the Popoagie the ridge chiefly consists of the Cretaceous series, the Niobrara occupying over half its length along this portion. Between the ridge and the sharp bluffs of the Laramie to the east is a broad valley of Montana shales; west of the ridge the Laramie does not occur, and the Montana and underlying beds are bent into a well-pronounced syncline which occupies the space to their westernmost outcrops along the base of the range. Almost on the axis of the Washakie anticline, near the northern extremity of the Niobrara ridge, is the Washakie oil spring, and a little north of Dallas, in the canyon of the Little Popoagie, are several oil wells of large capacity.

Northeast of the Washakie and Shoshone anticlines the flexures belonging to the Wind River system are but slight undulations, hardly visible except under favorable circumstances of outcrop. Along the immediate base of the range, however, the strata are here and there thrown into folds which, while not of the extent and size of the Shoshone and Washakie folds, are nevertheless well defined and contribute to both the structural and topographic features of the country. These minor anticlines usually occur in the Niobrara or in the underlying formations to a horizon near the top of the Trias.

The Wind River basin.—This was crossed twice in the present reconnoissance: once on the Embar and Fort Washakie stage road; and once on the road leading from Lander down Wind River to its canyon in in the Owl-Rattlesnake Range. On the former line the folds encountered belonged either to the Owl Mountain or Wind River systems, and have been described. On the latter road the valley between ranges is much broader and the area beyond the region of the mountain folds proper much greater. In crossing on this line the beds of the Bridger formation occupy the valley for nearly its entire width, covering all the older Cretaceous formations. A single flexure of importance was observed in the Tertiary beds. The axis of this lies about 12 miles north of St. Stephens Mission, and extends east and west be-between 5 and 10 miles, forming a noticeable elevation in the otherwise flat valley. The rise of the arch is but slight, the beds dipping hardly more than 5° or 6° north and south. The occurrence of the fold is, however, important, and establishes the action of forces in later Tertiary times, already noticed in connection with the Wasatch Tertiary both in this basin and in the Big Horn.

For a description of the region east of Wind River the reader is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SCALE

EXPLANATION OF PLATE II.

A. Sheridan district; prospect 2 miles east of Beckton; portion above the coal a mixture of lignitic shale and sandstone.
B. Sheridan district; mine 5 miles north of Sheridan.
C. Buffalo district; mine 1 mile east of Buffalo.
D. Prospect at mouth of No Wood Creek.
E. Red Lodge district, Montana; No. 1 or Yankee Jim seam.
F. Red Lodge district, Montana; No. 2 seam.
G. Red Lodge district, Montana; No. 3 seam.
H. Red Lodge district, Montana; No. 4 seam.

referred to the reports of the Territorial geologists[1] and to the maps of the Hayden Survey,[2] from which the data for the accompanying map have been obtained.

ECONOMIC GEOLOGY.

COAL.

STRATIGRAPHY.

The workable coal of the region under discussion is of Laramie age. Reports of its existence in the Dakota formation, in the foothills at the east base of the Big Horn Range, 5 miles southwest of Dayton, are current. The locality was visited by the writer and the "coal" found to be merely a very carbonaceous sandstone. Coal occurs in the Niobrara in the vicinity of the Clarks Fork Canyon, but the seam is very irregular—a mixture of shaly coal and slate, and of but 2 feet or 2 feet 6 inches maximum thickness. The chief interest lies in its presence in the Niobrara, heretofore not known to be carbonaceous or, indeed, except in Canada, to carry even an occasional leaf bed, both of which conditions exist here.

The coal beds of the Laramie are distributed throughout the formation from base to summit. No distinguishing features exist for determining the horizon of a particular bed except by direct reference to the base of the series or to one of the broad divisions of the formation—the lower, sandstone division, or the upper, clay division—and this only in an area where both are present and their relations may be clearly observed. Reference by direct measurement has been impracticable in the present reconnoissance, and it has therefore been impossible to establish the absolute position of all the seams encountered. However, some are known to occur near the base of the formation, and it is believed that others belong to a horizon about midway but in the shaly division of the series.

Beginning at the bottom, the first workable coal bed anywhere encountered occurs about 100 feet above the base of the Laramie; the second, in some localities, 70 feet higher. With these exceptions the seams in the lower or sandy division are thin and unimportant.

In the upper or shaly division the coal seams are numerous and form one of its characteristic features. With two or three local exceptions, however, all are too thin for economical working, and the coal is usually of a poorer quality than that at the base of the formation. The exceptions are the heavy beds north and west of Sheridan, east of the Big Horn Range, and a bed about 2 feet thick on Grey Bull, a little above the mouth of Meeteetse Creek, in the Big Horn basin.

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[1] Annual Report of the Territorial Geologist to the Governor of Wyoming. Years 1886–1888 and 1890.

[2] Maps, U. S. Geol. and Geog. Surv. of the Territories, F. V. Hayden. Parts of Central Wyoming. And U. S. Geol. and Geog. Surv. of Terr. Geological Map of Portions of Wyoming, Idaho, and Utah.

In the lower part of the formation the succession of the component strata and of the coal beds is very changeable; and a single coal seam of 10 feet in one locality may in another be split into two 8 to 10 feet apart, or, in a third, into a half dozen seams embracing a thickness of measures of 30 to 50 feet. Such separation is effected by the increase of sandstone or slate partings already present, or the acquirement of others wholly new. Again, the coal seams themselves may thicken to a workable size or diminish to the merest trace.

AREAS.

The distribution of coal within the confines of the Laramie in the region examined is quite general; but the localities of workable coal, so far as exposed in outcrop, are limited to four: that east of the Big Horn Range; the Red Lodge district, in Montana; the Sunshine area on the western edge of the Big Horn basin; and the Lander district, in the Wind River valley. That these four districts, however, embrace all the areas of coal of a workable thickness in this region is doubtful, for, from the general manner of occurrence of this mineral in the West, it is quite possible that beds of sufficient size may exist at other points, beneath the formations of later age.

Powder River field.—This name has been assigned by the Territorial geologist, Dr. L. D. Ricketts,[1] to the area of Laramie east of the Big Horn Mountains. It extends from a parallel at least 20 miles south of Buffalo north far into Montana and in an easterly direction it covers nearly half the distance to the Black Hills. Coal probably underlies much of it. Examination in the present reconnoissance has been confined to the western periphery and the region about Sheridan in the valley of Goose Creek.

The western rim of the Laramie for the greater part of its length is clearly defined by the outcrops of the more prominent sandstones at the base, these often constituting a line of low ridges, 6 to 10 miles from the foot of the Big Horn Range. Along other portions of the rim, however, the sandstones are broken down, the ridges disappear, and the limiting line of the formation, is concealed beneath superficial deposits. The general trend of this line and consequently of the coal horizon at the base of the formation, from the vicinity of Trabing, its southern end, to the Montana line, is N. 35° W. It passes close to the town of Buffalo, either a little to the east or west, continuing thence to the valley of Little Goose Creek. Along this portion of its course the edge of the formation was not followed but its trend is apparently direct, except, perhaps, in the vicinity of Massacre Hill, or the divide between Piny and Prairie Dog Creeks, a region of topographic peculiarities. On Big Goose Creek the basal sandstones of the formation outcrop about 1½ miles above Beckton Post-office, passing thence directly across ridges and valleys to a point on Tongue River a mile above Dayton. North of Tongue River, for much of the distance to the State line, the sandstones form a series of low ridges, defining the lines of drainage and giving to the streams a direction parallel with the strike of the beds. The dip of the strata along the western edge of the Laramie is usually less than 25°, shallowing rapidly to 5° or even less, as distance from the mountain increases. Over the interior of the Laramie area the strata vary in the direction of their dip, but the amount of dip is everywhere slight, rarely over 5° or 10°.

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[1] Annual Report of the Territorial geologist of Wyoming. January, 1890, p. 38.

The stratigraphical distribution of the coal in the Laramie of the Powder River field has never been determined in detail. Seams from 1 inch to 10 feet thick are encountered at various horizons—almost, indeed, from base to summit. The workable seams, however, are apparently of two horizons, near the bottom and midway the series.

The lowest coal recognized is that opened in the vicinity of Buffalo, which is probably within 200 feet of the base of the formation; but nowhere else along the western rim has a workable seam either been observed or reported at this horizon. The next highest seam of economic value is that opened on Big Goose Creek, about 2½ miles east of Beckton and just north of the road to Sheridan. This seam occurs several hundred feet above the base of the formation, in the more shaly series of beds usually forming the middle and upper portions of the Laramie. Five miles north of Sheridan, on the line of the Burlington and Missouri Railroad, a mine has been opened by drift on a seam the horizon of which is not satisfactorily determined but may be either the same as that of the one near Beckton or still higher in the series, a point that can be settled only by a profile and section of the measures from the base up. North of this, still other openings, of local importance, occur, and in the Tongue River valley, several miles below Dayton, coal of uncertain horizon is again reported. Several hundred feet of shale and sandstone overlie the Sheridan seam, constituting the high region east of Goose and Prairie Dog Creeks and extending beyond the Powder River. In this region several outcrops and openings have been reported but no attempt at correlation has been made.

The mines in the vicinity of Buffalo are three, and lie to the east, north and northeast of the town from 1 to 5 miles. They are opened in strata of gentle and somewhat variable dip, but withal 2° to 3° eastward. At a recently developed mine, which is 1 mile east of Buffalo and of all the openings the nearest to the western rim of the formation, the coal is reached at a depth of 103 feet beneath the surface, and presents the general section given in C, Plate II. The coal of the Buffalo district varies but little in appearance, and probably but little in its chemical constituents, in both particulars being an especially typical lignite. The woody structure is maintained in a remarkable degree, while the streak is a dirty brown, the fracture conchoidal, and its resistance to weathering slight. · The analysis given in the general table at the end of the chapter affords an insight into the relative proportions of its components, and its fuel ratio is far below the limit usually adopted as the dividing line between lignite and bituminous coal. Moreover, both water and ash are high. The coal, however, is extensively used for domestic purposes in Buffalo and the United States military post, Fort McKinney, and is said to afford a considerable degree of satisfaction.

The openings near Beckton are hardly more than prospects, from which, however, a small amount of coal has been taken to supply local demand. Sec. A, Plate II, represents the seam at the outcrop, but the coal was not sampled.

In the Sheridan district but a single mine is at present worked. This is on the line of the Burlington and Missouri Railroad, 5 miles north of Sheridan, and is the most extensive opening in the Powder River field, the main entry extending about 500 feet from the outcrop. The section represented in B, Plate II, varies little from that at other points in the mine, the coal maintaining itself comparatively clean and free from partings—with the exception of the clay streak 6 to 8 inches from the bottom, which is persistent, and local developments of slate or bone. The coal is fibrous, jointed and compact, and in texture it occasionally resembles a coal of the bituminous variety. In composition, however, it is a lignite, the fuel ratio being generally below 1, although one or two analyses made by the mine-owners place it at 1.12 to 1.14. The moisture is high, but the ash is remarkably low, a percentage as low as 4 being rarely encountered in this class of coals. Another noticeable feature brought out in the analyses of the Sheridan coals is the marked variability in the relative proportions of fixed carbon and the volatile hydrocarbons; the samples taken being illustrative not only of different localities on the seam but as well of different parts of the seam in the same vertical section. This important feature was unlooked for, and whether it will be found general for the mine and, indeed, for the field, must be decided by future analyses.

The Sheridan coal is largely used for domestic purposes and is said to be satisfactory in this respect. For stationary engines also it answers well in the absence of coals of higher grade, but for locomotive steaming it is reported too light. It also yields easily to atmospheric influences.

The No Wood region.—West of the Big Horn Range, at the mouth of No Wood Creek, a coal seam has been prospected to the depth of 40 or 50 feet, showing the section given in D, Pl. II. The seam is too much split by slate and sandstone partings to be of value, but its presence is indicative of the possibilities of the region, which is, perhaps, the western continuation of the Powder River field, from which it may have been separated by erosion across the crest of the Big Horn anticline.

The coal of the No Wood seam is in appearance and constitution a lignite. The single analysis of it shows a higher fuel ratio than that of the Powder River field, the upper division of the seam reaching but little short of 1. The moisture is also noticeably lower than in the coal east of the Big Horn Range, but this can not be regarded general from a single sample. The ash is much higher, as anticipated from the appearance of the coal, in which the distribution of impurities is marked.

The Red Lodge district of Montana.—Although this is beyond the confines of Wyoming and was but incidentally visited in connection with the present reconnoissance, it has so many features important for the comparison of coals further south, in the Big Horn basin, that a brief reference to it is here made. Sections of the seams thus far opened are given in E, F, G, H, Pl. II, and A, B, C, Pl. III.

The field was first examined and reported upon by Mr. J. E. Wolff, of the Northern Transcontinental Survey, in 1881 or 1882.[1] Since then it has been visited by Mr. W. H. Weed, of the U. S. Geological Survey,[2] from whom also a brief statement has come, in connection with other coal fields in Montana. To these two reports the reader is referred for more extended information than is given below.

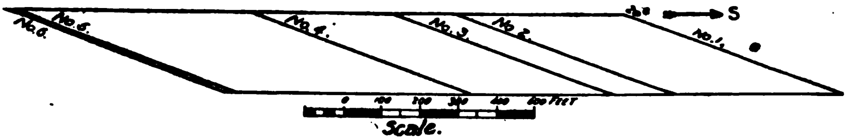

Fig. 1.—Section showing relative positions of coal seams.

The field extends several miles east and west of Rocky Fork, occupying a belt 3 to 5 miles wide along the northern base of the Absaroka Range. The productive coal-measures occur in a zone of 1,000 feet, apparently somewhere in the middle of the formation, but the exact stratigraphical position has never, so far as known, been determined. The coal-measures, along their northern edge, outcrop with varying southerly dip—in the region of Rocky Fork about 20°. To the south this dip gradually shallows to horizontal or slightly undulating, which position is maintained to the fault line at the base of the mountains, a distance of 3 to 4 miles. The coal horizon abuts against the fault-plane at a considerable distance beneath the surface.

The relative positions of the coal seams already opened, in the upper half of the zone, are shown in the accompanying section (Fig. 1).

In addition to these, seven others are reported within 600 or 700 feet below, five of which are said to be of workable thickness.

A point of special interest in the coal seams of this district is the number of partings of slate or other material. These vary in thickness from $\frac{1}{16}$ of an inch to 6 or 8 inches, on the one hand too thin for separation in mining and of necessity going into the coal shipments, on the other hand too thick to pass into the coal product and therefore requiring separation in the mine. This is, moreover, a feature of many of the seams in the Rocky Mountains in southern Montana, and yet both vertical and horizontal beds are mined with advantage. In illustration of the effect of inclusion in the shipping product of partings too small for separation in mining, two samples, Nos. 117 and 118, were taken at the same section in the slope of the No. 4 seam, the former including all partings finding their way into the shipments, the latter of clean coal. The analyses show a diminution of one-third in the amount of ash in the coal from which the partings were excluded.

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[1] Vol. XV. Tenth Census of the United States, p. 755 and plates.

[2] Engineering and Mining Journal, Vol. LIII, No. 20, May 14, 1892, p. 521.

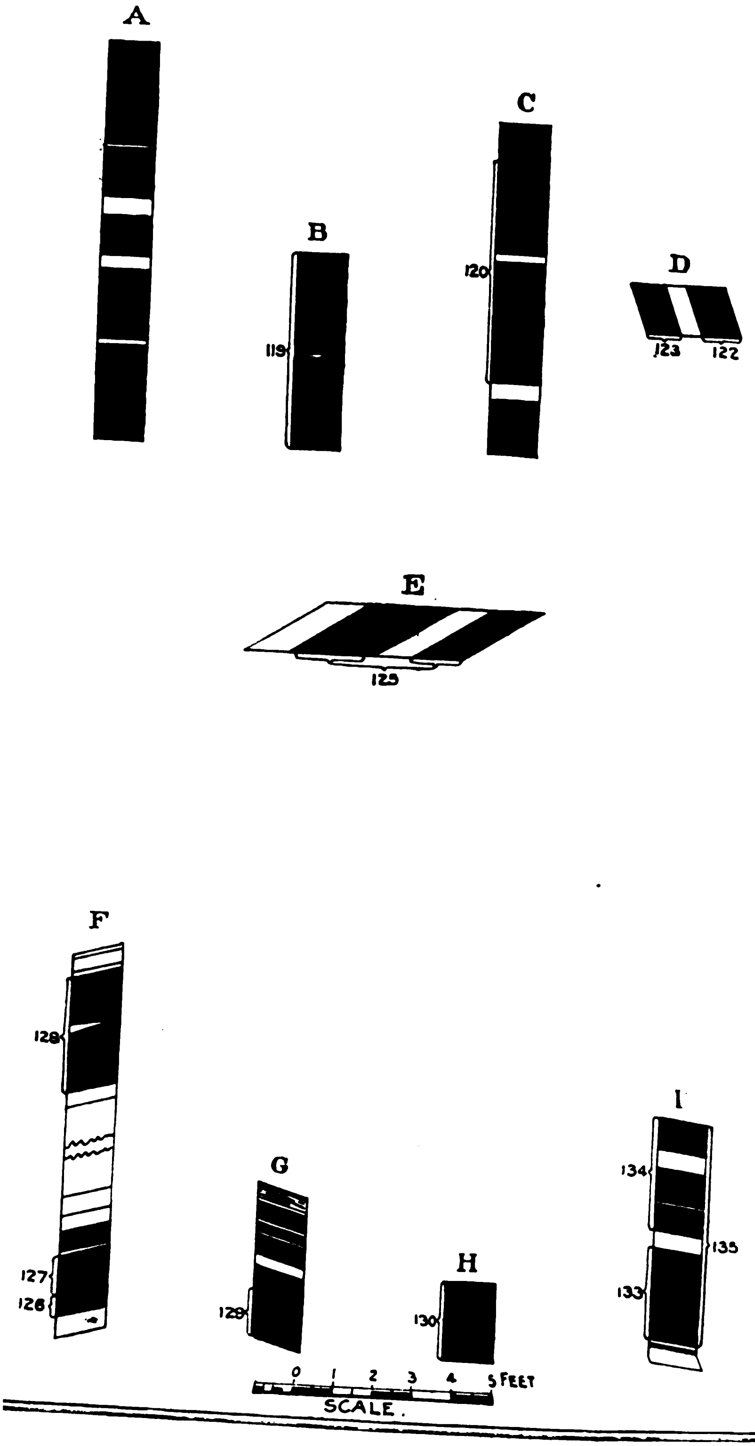
The analyses of the Rocky Fork (including Bear Creek) coals show them to be of a higher grade than any sampled elsewhere during the present reconnoissance. The fixed carbon is higher and the volatile combustible matters, the moisture and the ash, are lower than in the others, while the fuel ratio is very noticeably advanced.

Before passing from the consideration of the coals of the Rocky Fork district, attention is called to the sample No. 120, obtained from a Bear Creek prospect. It illustrates the slight change that some coals of the lignite class occasionally undergo in the mine, even after long exposure, in the present instance three years having elapsed since the face was cut, and in sampling but an inch or two having been removed. This coal is well up to those taken at depths in other portions of the district, even allowing for a possible higher quality of coal.

The front of the Absaroka and Shoshone Ranges.—From the Rocky Fork coal field, which extends to a point 7 or 8 miles north of the Montana-Wyoming line, southward to the Sunshine district, the northern limit of which is between Meeteetse and Grey Bull Creeks, there are numerous exposures of coal, but all, so far as explored, show a seam too thin for economic development on an extended scale and with one or two exceptions even below the limits of a working thickness to supply local demands. The coal beds of this belt occur both in the lower, more sandy division of the Laramie, and in the upper or shaly zone of the formation. In the former but a single seam has been observed, this extending through the entire length of the belt with the preservation of all its characteristic features. In the shaly division the seams are numerous, but generally either very thin or of a low grade of lignite intermingled with dirt streaks. The seam of chief importance in this division has a thickness of 2 feet of clean coal and is exposed on Grey Bull above the mouth of Meeteetse Creek (H, Pl. III). The chief exposures of the lower coal are: on a branch of Line Creek; near the boundary of Wyoming and Montana; along the base of the Laramie in Heart Mountain; on Sage Creek, near the Frost ranch; and at Arland on Meeteetse Creek. Besides the foregoing seams and their exposures, two others of undetermined geological horizon exist

EXPLANATION OF PLATE III.

A. Red Lodge district, Montana; No. 5 seam.
B. Red Lodge district, Montana; No. 6 seam.
C. Red Lodge district, Montana; Bear Creek mine.
D. Big Horn Basin; Nutting outcrop; near Montana-Wyoming line.
E. Big Horn Basin; Frost outcrop; Sage Creek south of Stinking Water.
F. Big Horn Basin; Brundage outcrop; SE. spur of Meeteetse Mountain.
G. Big Horn Basin; Arland mine.
H. Big Horn Basin; Grey Bull River; outcrop, 1 mile above mouth of Meeteetse Creek.
I. Big Horn Basin; Sunshine district; outcrop, north bank of Grey Bull River, 1 mile below mouth of Iron Spring Creek.



SECTIONS OF COAL SEAMS.

high up on the northeast slopes of Meeteetse Mountain, at the head of Carter Creek and the north fork of Sage. (F, Pl. III.)

The coal bed in the lower portion of the Laramie occurs between 100 and 150 feet above the base of the formation. It is included in a narrow zone of lignitic clays, which are quite generally underlain by a heavy bed of white sandstone and overlain by one of yellow. The seam itself is usually made up of two benches of coal, separated by a 2 to 4 inch band of brown lignitic slate, which weathers a milky white. These features are so pronounced and persistent that, with the constant position of the bed, they serve as a general means of its identification. Sections D, E, G, and I, Pl. III, and B, Pl. IV, give the general character of the seam, excepting that in the region affording the last two (the Sunshine district) the coal has increased to workable thickness.

The coal of this horizon usually lies within the region of mountain folding, either on the flanks of the main uplifts or included in the subordinate (parallel) folds along their base. The dip is, therefore, rarely less than 15°, often 45°, and occasionally 70°, and the direction generally eastward, except where, as on Sage Creek, it is included in a subordinate fold, either eastward or westward, according to the side of the flexure upon which it is.

In appearance the coal is hard, black, of bright and sometimes oily luster, and bears a close resemblance to coals of the bituminous variety. It is, however, a lignite, with high moisture contents, ash from 6 to 15 per cent, and a fuel ratio considerably below 1. This applies also to the coals of uncertain horizon in the slopes of Meeteetse Mountain, and, indeed, to the seam in the upper Laramie series, on Grey Bull, near the mouth of Meeteetse Creek. The latter coal, however, has a more general resemblance to lignite than the former.

Sunshine district.—This embraces an area approximately 9 by 15 miles, the greater dimension being east and west. The northern limit is between Grey Bull and Meeteetse Creeks; the southern, probably between Gooseberry and Grass Creeks; the western, a north and south line a few miles west of Sunshine Post-office; and the eastern, arbitrarily taken, along the edge of the region of subordinate folds, a few miles east of Enos Creek, a tributary of Gooseberry from the south. It is highly improbable that this entire area is underlain with coal, but the general distribution of known outcrops and the thickness of the beds render it a region of considerable possibilities.

The coal area of the district is separable into a main body lying almost wholly east of Wood River, and an inlier west of this stream, the two separated by erosion along an anticlinal fold.

The coals occur in both the lower and upper divisions of the Laramie, but the most important seams are found in the former. Two occur in this division: the lower and larger, Sec. I, Pl. III, and Sections A, B, C, D, H, Pl. IV, about 100 feet above the base of the formation; the upper, E, Pl. IV, smaller and of local prominence only, 70 feet higher in the series. The lower, by its stratigraphical position and component layers—two benches of coal separated by a characteristic slate—is identified with that already described at this horizon further north. In the upper division of the Laramie the single seam of importance is that shown in Sec. G, Pl. IV; it occurs in the lower portion of this division.

The observed northernmost outcrop of the large seam near the base of the formation is in the banks of Grey Bull, 1 mile below the mouth of Iron Spring Creek and about 7 miles north-northeast of Sunshine Post-office. The outcrop presents the appearance in I, Pl. III. The dip of the measures is here about 7° N. 60° E., or down stream. West of this the coal rises in the bluffs of the valley, and after one or two gentle flexures reaches the line of its north and south outcrop a little above the mouth of Wood River. North of Grey Bull this outcrop passes into the prairie and, with one or two irregularities of trend caused by local folds, finally unites with that passing south from Arland. Beneath how much of the area north of the stream the coal maintains a workable thickness is undetermined, the examination not having been carried beyond the immediate river valley. South of Grey Bull the coal horizon passes into the bluffs in the forks of this stream and Wood River, crosses the channel of the latter between 1 and 2 miles above its mouth, and thence enters the high ridge to the east, in which it continues to Gooseberry Creek, a distance of 7 or 8 miles. On this line of outcrop the only exposure of importance encountered was in the banks of Wood River, 4 to 5 miles below Sunshine, where is a seam comprising two benches of coal separated by 2 to 4 inches of slate. This, except for the thinning of the upper bench to 5 or 6 inches, closely resembles the bed of general occurrence along the range to the north, and in its main divisions, also the larger seams of the Sunshine district. There is thus an indefinite area in this vicinity over which the main coal bed has either been reduced below workable thickness or has been split into a number of minor seams, as on Gooseberry Creek, on this same line of outcrop, where the section in F, Pl. IV, is to be seen. South of Gooseberry Creek the basal series of Laramie rocks was not followed.

Within the periphery of the main body of Laramie in the Sunshine district the several anticlines already described in the structural chapter each expose a rim of the lower coal-measures of the formation. These have not all been explored for coal, but in two instances seams of workable thickness have been, one observed by the writer, the other reported to him. The anticlines that have brought to the surface these seams are the one crossing Gooseberry Creek, 2 miles above Iron Spring, and that south of Gooseberry Creek, 2 or 3 miles below the mouth of Enos Creek.

The exposure of the coal horizon in the former or upper anticline [illegible]

EXPLANATION OF PLATE IV.

A. Big Horn Basin; Sunshine district; outcrop, Wood River, 1½ miles above its mouth.

B. Big Horn Basin; Sunshine district; outcrop, north side Sunshine Gulch, 2 miles NNW. of Sunshine post-office.

C. Big Horn Basin; Sunshine district; outcrop, tributary Sunshine Gulch, 2¾ miles NW. Sunshine post-office.

D. Big Horn Basin; Sunshine district; outcrop, tributary Sunshine Gulch, 3 miles NW. Sunshine post-office.

E. Big Horn Basin; Sunshine district; outcrop, tributary Sunshine Gulch, 3 miles NW. Sunshine post-office. An upper seam locally developed.

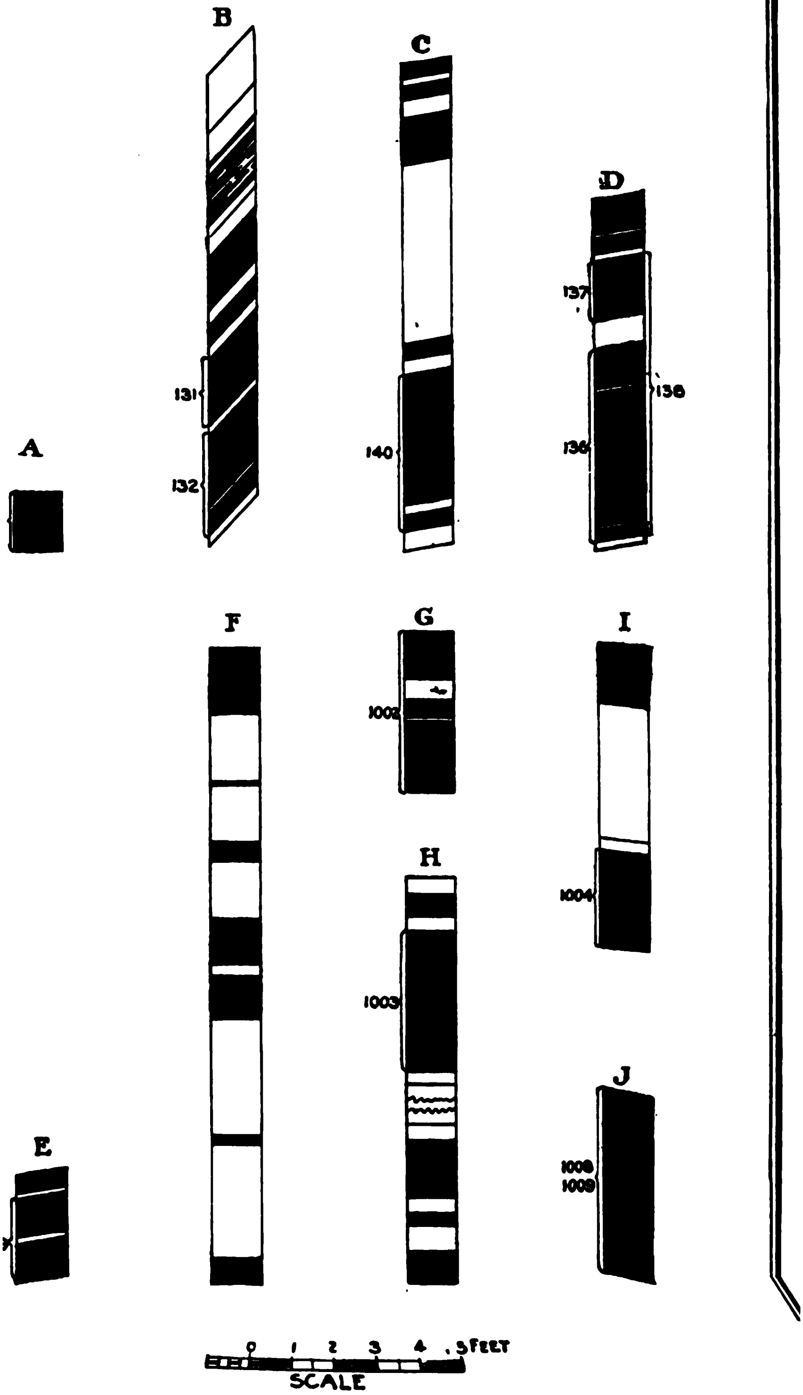
F. Big Horn Basin; Sunshine district; outcrop, south bank Gooseberry Creek, 4 miles SE. Sunshine post-office.

G. Big Horn Basin; Sunshine district; outcrop, Gooseberry Creek, 2 miles above mouth of Enos Creek.

H. Big Horn Basin; Sunshine district; outcrop, tributary of Gooseberry Creek from south, 2 or 3 miles east of Enos Creek.

I. Big Horn Basin; Embar district; Smith prospect; outcrop, 4 miles NE. of Embar post-office.

J. Wind River Basin; Lander district; mine, 8 miles NE. of Lander.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about 10 miles long, and the workable coal is reported on the northeastern side of the fold in a sharply eroded gulch entering Gooseberry Creek one-quarter to one-half mile above Iron Spring. Here an opening is said to show 5 feet of coal in 3 or 4 benches separated by partings of slate from 1 to 3 inches thick. The bed is probably identical with the main seam of the district, and the appearance of the coal is said to be the same in both. The area of workable coal in this portion of the district is undetermined.

The anticline below Enos Creek presents an exposure of the coal horizon of 4 or 5 miles. The coal outcrops in workable thickness near the northern end of the topographic basin eroded along the axis of the fold, having a dip of 5° northeast. Two beds are present, separated by 10 to 20 feet of sandstone and shale, the entire section being given in Fig. H, Pl. IV. The upper bed affords 3 feet 7 inches of workable coal; the lower 2 feet 8 inches, separated into three bands. The latter somewhat resembles the seam so generally present near the base of the formation north of the Sunshine district, there being two main benches separated by a bluish white slate parting. The bed widens to 12 feet a few hundred feet southeast, the amount of coal remaining the same, but its benches being further separated or split into minor layers by fresh partings. The sandstone layer separating the two main beds is also variable from point to point. The variability of this series of coal, shale and sandstone renders an estimate of the possible productive areas of the district very difficult. Only careful prospecting along the outcrop of the beds and drilling in the interior portions will furnish reliable answers to questions of this nature.

The inlier of Laramie west of Wood River, which is in structure a syncline, is approximately 8 or 10 miles long by 2 or 3 wide. It is completely encircled by the horizon of the coal, the chief exposures of the seams being near the southern end, from 2 to 4 miles northwest of Sunshine Post-office, in the bluffs of Sunshine Gulch and its tributaries. The beds here dip 10° to 35° northwest to north, according to their position on the periphery of the syncline, the axis of which has a general north and south trend. The sandstones of the formation are heavily developed, and the individual beds for 150 or 200 feet above the base are readily recognizable by their thickness, persistence and color. Those immediately underlying and overlying the main coal seam are particularly prominent, the former being a heavy bed of white sandstone, the latter of yellow, characteristics that are maintained, not only over the Sunshine district, but along much of the area bordering the mountains to the north and south.

Two beds of coal occur in this region. The lower is the important one, the upper, 70 feet above, being but 2 feet 8 inches thick and apparently of local development only. Exposures of the lower seam are given in Sections B, C, and D, *Pl.* IV, and its identity with that generally developed at this horizon to the north of this district is clearly established by comparison of the component layers; two broad benches of coal appear in Sections B and D, Pl. IV, more or less split by narrow partings, indeed, but separated from each other by the usual 2 to 4 inch band of brown carbonaceous slate, weathering bluish white. Section C, taken at a point midway between the localities of B and D, also shows this parting, but there has apparently been a local interpolation of sandstone and shale in the upper part of the seam. The extent of outcrop covered by the three sections is about 1 mile, but other prospects, showing the seam still of workable thickness, are reported further west, which would increase the length for this region to between 1 and 2 miles. Coal also outcrops at other points about the syncline, but the seams were of necessity left unopened.

Comparison of the lower seam of the Sunshine district with those of the Rocky Fork region, shows a similarity between them in the proportion of coal to partings, and in the distribution of the latter throughout the seam, that enables the statement to be made that, notwithstanding the amount of dirt contained in the Sunshine beds, they can be economically worked on a large scale.

The coal of the lower seam in the Sunshine district is of two varieties: that of the upper bench—above the middle parting of brown or bluish white slate—is fibrous, dry and brittle, with a brown streak, and tendency to rapid weathering; the lower bench, on the contrary, has a black streak, is oily in appearance, hard, only slightly fibrous, breaks in blocks, and resists weathering far more than the upper coal. The physical properties of the lower bench indicate it to be of the better quality, and this implication is borne out in the chemical analysis of the few samples taken.

The chemistry of the coal shows it to be lignite. Its true value as a fuel can not here be correctly estimated, owing to the necessarily few samples and their proximity to the outcrop of the seam, but the analyses combined with a field acquaintance with the coal warrant the statement that while it may fall a little below the coals of the Rocky Fork mines, it will yet compare favorably with them upon being opened. The fuel ratios of the samples are, with one or two exceptions, very low, but it is believed that the higher ones will more nearly represent the character of the coal. The ash is comparatively low; the moisture comparatively high.

The coal is, in its combined physical and chemical properties and in the size and character of the seam, superior to other coals of the Big Horn basin, and by reason of this the Sunshine district is to be recommended for private exploration to individuals or corporations directing their efforts toward opening this intermontane region to commerce and settlement.

The upper or shaly division of the Laramie in the Sunshine district has but one coal seam of prominence, although many from an inch to a foot exist wherever the series has been preserved from erosion. The seam referred to outcrops on Gooseberry Creek opposite the mouth of Middle Fork, about 2 miles above Enos Creek. It is represented in Sec. G, Pl. IV. There are 3 feet 6 inches of coal, separated two-thirds the way from bottom to top by a 7-inch band of black slate, which is locally very carbonaceous. The strike at the outcrop is N. 50° to 70° W., but the trend of the strata in the vicinity is variable by reason of the folding to which they have been subjected. The dip of of the coal is 10° southwest. The extent of the seam is undetermined. The appearance of the coal is much more that of a typical lignite than the coals of the lower division of the formation, and the chemical analysis shows it also to be slightly higher in water, with a low ash, and a very low ratio between its fixed carbon and volatile combustible matter.

The coal of the Sunshine district is said to outcrop as far south as Grass Creek, and, again, on the Middle Fork of Gooseberry, probably along the western rim of the Laramie. So far as observed by those reporting it, the seams are not of workable thickness, but in an unprospected region of such rapid variation this signifies but little.

Embar district.—The exposure of coal next south of the Sunshine district is the Smith prospect, 4 miles northeast of Embar.

The coal lies at a distance of between 3 and 4 miles from the base of the Owl Mountains and the seam is somewhat beyond the area of the larger folds which there exist. The locality of the outcrop is in a point of Laramie projecting southeastward between Cottonwood Creek and the North Fork of Owl Creek. The edge of the formation lies in the bluffs north of the latter stream, and opposite the forks turns north and passes into the high ridge beyond Cottonwood.

The coal seam is of the lower Laramie series. The section at the outcrop is given in I, Pl. IV, and shows the coal to be below workable thickness. The dip is here 5° east, but the strata of the region are slightly folded and the dip consequently somewhat variable. The coal is a bright, hard, and oily-looking lignite, higher in its fuel ratio than some other coals of the Big Horn basin. The ash is low, but the water content is one of the highest met with.

The information concerning the occurrence of coal in the Big Horn basin does not show it to be a region of general promise. The nature of a reconnoissance precludes detailed examination, but the Laramie has been crossed on many lines, and it is believed that little if any coal of importance has escaped attention. Even if some coal fields have not been found, the future lines of examination by private individuals are here suggested. Of the different areas the Sunshine district is the most favorable for coal enterprises, but it requires the most careful and detailed examination before investment and development.

The important coal beds of the Wind River valley are chiefly confined to the lower or sandstone division of the Laramie, the seams probably corresponding to those of the same stratigraphic horizon in the Big Horn basin.

Muddy Creek field.—This embraces the area of Laramie immediately south of the Owl Mountains. Several small seams were observed near the base of the formation in the two promontories southeast of the Mail Camp at a distance of 2 to 4 miles from the Owl Creek Range, and 6 or 7 miles farther east, in the southern face of the outer ridge, between 3 and 4 feet of coal are reported dipping southeast 15° to 25°. The coal is a lignite, of use for domestic purposes but unfitted for the heavier demands of commerce. This coal is on the reservation of the Shoshone and Arapaho Indians, and at present not open to prospectings or development by private individuals.

Lander field.—This field is at present the most important in the Wind River valley. It lies 8 miles northeast of Lander, the coal being opened just south of the confluence of the Big and Little Popoagie Creeks. The basal sandstones of the Laramie here outcrop in a prominent line of bluffs, dip northeast about 13°, and pass beneath the prairie beyond. The area of workable coal is unknown, but is probably several square miles, with portions where the seams would be unprofitable to open. Northwest of the Big Popoagie the coal has not been opened and little is known of the character of the seam in this direction. The measures pass across the prairie to the valley of Little Wind River, where they are found in the bluffs north of the stream, dipping slightly northeast.

A section of the Lander seam is shown in Sec. J., Pl. IV. The coal is fibrous, bright and hard, and has a splintery fracture, but weathers rapidly. In appearance it resembles a lignite of the higher class, and the chemical analyses place it among the better coals encountered in the reconnoissance.

Upper Wind River region.—On the Upper Wind River and its tributary, Warm Spring Creek, and also on several other streams in this vicinity, coal is reported in seams of a thickness somewhat below the requirement for economic working. The locality was necessarily left unvisited, but three samples were sent by owners of properties or their representatives, the analyses of which have been incorporated in the general table at the close of the chapter. The samples sent did not coke, and they still appear to belong to the class of lignites, but their high place in the scale of the coals of the Big Horn and Wind River basins is clearly perceptible upon comparison of analyses, and their quality, and their position within the more massive part of the mountains, merit for them special attention in the future.

District.	Mine or prospect.	Locality in mine.	Remarks.	Thickness of seam.		Number of sample.	Contents.					Fuel ratio $\frac{C}{V\,H\text{-}C}$
							Moisture.	Volatile matter.	Fixed carbon.	Ash.	Sulphur.	
				Ft.	*inch.*							
Sheridan	5 miles N. of town	Breast of main entry	Fresh	5	10	112	14·78	46·56	35·39	3·27	0·24	0·76
	do	do	do	5	10	113	15·23	46·25	35·74	2·78	0·37	0·77
	do	do	do	5	10	114	14·07	56·20	25·76	3·97	0·74	0·46
	do	Breast of return (air) entry	100 feet southeast of 112-114. Fresh.	5	10	115	14·00	53·98	29·50	2·52	0·46	0·55
	do	Room 125 feet from outcrop	3 months idle	5	10	116	13·56	57·59	26·78	2·07	0·28	0·46
Buffalo	1 mile E. of town	Room near foot of slope	Fresh. Cover, 103 feet.	6	0	1,012	15·23	48·72	25·25	10·80	0·82	0·52
No Wood	No Wood	Side of entry, 40 feet from outcrop.	6 to 12 months idle; top.	2	4	1,010	11·62	39·23	39·09	10·06	2·98	1·00
	do	do	6 to 12 months idle; bottom.	1	6	1,011	9·75	43·52	38·17	8·56	1·51	0·88
Lander	8 miles NE. of town	Room near slope, 250 feet down.	Fresh	4	4	1,008	15·35	45·91	35·00	3·74	0·50	0·76
	do	Room near slope, 200 feet down.	do	4	8	1,009	14·32	48·74	33·57	3·37	0·44	0·69
Red Lodge	The slope, No. 4 seam.	From side of slope, 830 feet down.	Comparatively fresh; included small partings.	8	2	117	8·27	42·62	38·50	10·61	1·91	0·90
	do	do	Comparatively fresh; clean coal.	8	2	118	9·08	40·35	43·47	7·10	1·73	1·08
	No. 6, No. 6 seam	Considerable distance in	Comparatively fresh	5	0	119	8·68	42·02	40·39	8·91	2·24	0·96
	Bear Creek	Entry, 60 feet in	Exposed 3 years	5	6	120	8·69	43·40	43·86	4·05	1·52	1·01
Clarks Fork	Nutting	Surface. Sample from A bed (top).		1	0	122	16·26	61·07	17·32	5·35	0·73	0·28
	do	Surface. Sample from B bed (bottom).		0	10	123	16·08	47·30	20·92	15·70	0·67	0·44
Sage Creek	Frost	Surface		2	8	125	11·81	43·44	37·77	6·98	0·61	0·87
	Brundage	Surface. Lower seam	Bottom	0	7	126	14·73	59·06	14·89	11·32	1·58	0·25
	do	do	Top	1	0	127	16·90	51·80	19·43	11·87	0·88	0·37
	do	Surface. Upper seam		2	6	128	11·84	40·93	40·89	6·84	3·59	0·98
Arland	Arland	Entry, 30 feet in	Exposed 6 to 10 months.	1	2	129	13·75	51·68	30·17	4·40	0·63	0·58
Meeteetse	Meeteetse	Surface, at edge of stream		2	0	130	14·01	45·01	35·31	5·67	0·22	0·78
Sunshine	Grey Bull	Surface. Bluff at stream level.	Bottom	2	5½	133	12·15	46·99	35·92	4·94	0·68	0·76
	do	do	Top	2	4½	134	10·26	54·45	27·32	7·97	0·75	0·50
	do	do	Whole	4	10	135	11·03	52·10	30·32	6·55	0·84	0·58
	Wood River	do		1	6	1,001	11·79	44·75	40·13	3·33	0·60	0·90
	Sunshine Gulch, No. 1.	Surface pit	Top	1	3	131	13·96	44·19	36·65	5·20	0·51	0·83
	do	do	Bottom	1	4	132	13·79	66·40	18·17	1·64	0·55	0·27
	Tributary of Sunshine Gulch, No. 2.	do	Bottom of series occurring in other pits.	3	5	140	12·37	52·29	29·51	5·83	0·58	0·56

CHEMICAL ANALYSES—Continued.

District.	Mine or prospect.	Locality in mine.	Remarks.	Thickness of seam.		Number of sample.	Contents.					Fuel ratio $\frac{C}{VH \cdot C}$
				Ft.	*inch.*		Moisture.	Volatile matter.	Fixed carbon.	Ash.	Sulphur.	
Sunshine	Tributary of Sunshine Gulch, No. 3.	do	Bottom	4	11¾	136	11·51	40·42	40·85	7·22	0·62	1·01
	do	do	Top	1	6	137	12·56	60·13	22·23	4·98	0·56	0·37
	do	do	Whole	6	5¾	138	12·40	50·78	30·29	6. 53	0·59	0·60
	Tributary of Sunshine Gulch, No. 4.	do	Seam overlying that of the foregoing three prospects.	1	11½	139	10·95	52·41	19·12	17·52	0·47	0·36
	Tributary of Gooseberry Creek.	Surface. Ridge outcrop		3	7½	1, 003	14·87	44·80	35·22	5·11	0·40	0·79
	Gooseberry Creek.	Surface. Bluff, edge of stream		3	6	1, 002	13·71	61·51	20·58	4·20	0·34	0·33
Embar	Smith	Surface		2	6	1, 004	15·00	46·69	34·27	4·04	·39	0·78
Upper Wind River		Prospect				1, 005	9·36	44·89	41·87	3·88	2·88	0·93
Do		do				1, 006	9·95	41·39	37·95	10·71	3·07	0·92
Do		do				1, 007	7·73	43·92	35·45	12·90	4·77	0·81

PETROLEUM.

The oil resources of Wyoming have already been described in a preliminary manner by the territorial geologists, Drs. Samuel Aughey and Louis D. Ricketts,[1] and to their reports the reader is referred for more extended information than is here given.

The petroleum observations during the present reconnoissance were limited to such localities as lay directly in the line of exploration. These were the vicinity of Fort Washakie, the region about Dallas, and the neighborhood of Bonanza, on No Wood Creek in the Big Horn basin.

The petroleum in each of these localities occurs along an anticlinal axis, coming to the surface in two instances in strata of Niobrara age, in the other in the Triassic Red Beds. The structural details of the anticlines have been given.

The petroleum spring of the Shoshone anticline, 2 or 3 miles northeast of Fort Washakie, occurs in a broad flat just off and west of the main valley of the Little Wind River, closed in by a low escarpment of Triassic Red Beds. Its position is near the axial line of the anticline, perhaps a little to the southwest of it. The escape of the oil at this point, as well as of the great hot spring 1 mile to the southeast, is probably due to the fracturing of rocks along the axis of the fold, where the bending has been sharper than elsewhere. The fold is asymmetric, the strata on the southwest dipping from 45° to 80°, those on the northeast 15° to 20°. The dip, however, flattens considerably on either side as distance from the center is gained.

The petroleum comes to the surface through a wash that occupies the flat, but the Red Beds are just beneath, their horizon being roughly estimated at about 500 or 600 feet below the summit of the formation. The oil, together with a small amount of gas and water, rises in a number of little springs within an area of 100 or 200 square yards. A hard crust of asphalt has been formed about the springs by the evaporation of the more volatile hydrocarbons. The oil is brownish black, and evidently heavy, though its gravity was not measured. The asphalt from this deposit has been very satisfactorily employed at the military post near by in the construction of walks and for other purposes in and about the buildings. The oil is occasionally used in the crude state as a lubricant.

A second oil spring, to which the name Washakie has long been applied by Indians and others, occurs 8 or 9 miles southeast of the first, near the northern end of the long ridge of the Washakie anticline. The oil rises to the surface nearly in the axis of the fold, in somewhat sharply crumpled Niobrara strata. The Niobrara is a series of argillaceous, arenaceous and calcareous shales, and it is apparently in the somewhat more sandy varieties that the oil here seeps to the surface. The amount of seepage is small, collecting slowly in two or three little holes dug for the purpose. The petroleum saturates a belt of strata from 10 to 20 feet wide, and nearly 100 feet in length. The spring has long been famous among the Indians for its healing properties.

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[1] Ann. Report, Territorial Geologist, Jan., 1886, Laramie, Wyo.; Ann. Report, Territorial Geologist, Jan., 1888, Cheyenne, Wyo.

The Dallas oil field is 12 to 15 miles southeast of Lander, near a post-office of the same name. This region was designated by Prof. Aughey as the Shoshone oil field. The central feature is the anticlinal structure, at the western end of which is the Washakie Spring. It is parallel with the Wind River Range, from which it is separated by a long, narrow syncline. The anticline is several miles wide, the center being occupied by the Red Beds of the Trias, fully 2,000 feet thick, one-third of which are exposed along the canyon of Little Popoagie Creek, which here occupies the axis of the fold. The strata dip outward 10° to 20°. The oil is said to have been discovered near the mouth of Twin Creek as seepage from the rocks along the edge of the valley and as saturating a considerable area of the soil and wash occupying the bottom. The locality is fully described by both Drs. Aughey and Ricketts, and it is desirable in this reference only to emphasize the mode of occurrence of the petroleum. At present three oil wells have been sunk in the valley bottom, at points forming nearly an equilateral triangle, the maximum distance apart of any two being about 600 feet. The wells are sunk at the base of the cliffs, a little on either side of the anticlinal axis, and are 400, 600 and 1,000 feet deep, respectively. All are productive in a large degree, and have a steady surface flow when turned on. They are, however, kept plugged, and only so much oil is lost as escapes by accident or comes up outside the casing. The product forms an excellent lubricant, and supplies the several mining camps, and town and farm requirements, throughout a large adjoining area. The petroleum is said to contain about 45 per cent of illuminating oil. A strong accumulation of gas is acquired by keeping the well closed. The details of various analyses and tests to which the product has been submitted are given in Prof. Aughey's report for 1886.

The Bonanza district, on No Wood Creek, in the Big Horn basin, is again illustrative of the occurrence of oil springs in close proximity to the axis of a strongly developed anticline. The petroleum here reaches the surface in two or three small springs in the more or less argillaceous strata of Niobrara age near the northwest end of the prominent ridge and fold which extends for several miles along the western base of the Big Horn Mountains, and to which the name Bonanza has been applied. The springs occur in a gulch just within the ridge and are but slightly off the central line of the fold. The oil is accompanied by a small amount of water and gas, the globules breaking and spreading on the surface of the water in a thin iridescent film which may be collected by skimming. For some distance on all sides the strata are heavily saturated with oil. The product is the lightest observed during the reconnoissance, and probably contains much the largest amount of illuminating oil. The color is green by reflected light and a rich wine by transmitted light. The spring is not a large one, affording in its present condition about a barrel a day.

Other springs are reported on the general line of this anticline at points 1, 17, 25 and 50 miles south, that 25 miles distant being the largest.

Reports of other petroleum occurrences in the Big Horn basin could not be corroborated.

The geologic horizons at which the oil of the foregoing springs finds the surface are the Triassic Red Beds and the Niobrara shales. In other portions of Wyoming, particularly east of the Wind River, oil appears at the surface in the Trias, the Dakota, and what is regarded by Dr. Ricketts as the Fox Hills formation. Minor amounts are also found seeping from other formations, as the Benton and Laramie, and possibly even some of the Tertiary beds. The actual source of these oils can not be determined with the small amount of data at present available. The reservoirs may be the more sandy strata of either of the formations mentioned, or there may be one primary reservoir—the Triassic sandstones and conglomerates—from which the oil has escaped to the others, which would then be regarded as secondary reservoirs. Transmission would have been greatly interfered with by intervening shales, but it is not impossible that a most potent aid to it was derived from fissuring. Between the Trias and Dakota, perhaps the two chief reservoirs, the deposits of shales are not heavy, and passage from the lower to the upper may easily have been established. With the Fox Hills such communication across the broad band of Colorado and Montana shales would have been opened with much greater difficulty, and perhaps between the Dakota and Fox Hills there may have been an intervening source of oil. Very considerable differences exist in the gravity and other characteristics of the oils from the various localities, but from them little satisfactory evidence as to the source of the oils has thus far been adduced.

Regarding structural influences upon the appearance of oil at the surface, it is a significant fact that in nearly every case, whether observed by the writer or by the local geologists, the oil escapes at the surface along the axis of an anticline or in a region where the rocks have been folded, and crushed or fractured in some degree. Fracturing is most pronounced along the axis of a fold, and it is here, therefore, that the springs, the natural oil wells, are most often found.

The natural occurrences of oil and the success thus far attained in the drilled wells, warrant firm and favorable belief in the future of the Wyoming petroleum fields.

BUILDING MATERIALS.

The building materials of the region explored will be found numerous, varied and accessible when the demand is created for them. Granites and schists occur in the mountains, and sandstones, limestones and clays for the manufacture of brick, on their flanks and over the adjoining prairies. The variety of grain, color, texture and composition is great, and, with the effects of combination, the most exacting demands of architecture may be successfully met. With the exception of the eruptive series of rhyolitic tuffs and a few marbles, the same building materials are found as exist in Colorado, which is the leading, as it was the pioneer State in the production of architectural and ornamental stones of the West.

Among the stones which will be found of special importance are the granites of the Archean and the quartzites of the Silurian and Carboniferous, for foundations and the lower courses of higher buildings. For the middle and upper portions and for private dwellings there are the red Triassic sandstones, and the grey, yellow, and white sandstones of the Laramie. The several varieties are coincident in their distribution with the formations to which they belong, but careful search for localities of superior stone must be made, for even within the same layer the properties vary from point to point. No attempt was made, in the work of the past season, to determine these details.

The clays particularly adaptable for brick-making are the Cretaceous, although doubtless much of the Wasatch of the Big Horn basin would likewise be found suitable. Many horizons in both the Laramie and the upper portion of the Montana are well suited to the manufacture of pressed brick; in other regions also yielding materials of excellent color, durability and strength.

For flagging and paving purposes, the stones, excepting the granites, are not well adapted, unless, perhaps, an occasional layer of quartzite in the Silurian. None was observed of the hardness and durability of the upper beds of the lower Trias in the vicinity of Denver, Colorado.

Limestone and gypsum occur in the Carboniferous and Jurassic, respectively, in enormous quantities. The gypsums are very pure and from 5 to 30 feet thick. They are distributed about the periphery of both the Big Horn and Wind River basins, and are also found to the east of the Big Horn Mountains, and northward in Montana along the Pryor Mountains and the Absaroka Range.

GOLD.

The only metal at present produced along the route of reconnoissance is gold. This occurs about Bald Mountain on the summit of the Big Horn Range a few miles south of the Montana-Wyoming line. The productive strata are a series of red conglomerates and sandstones of *Archean débris*, lying directly upon the Archean; but whether they were local developments of Cambrian age or merely deposits of recent times was not determined. They occupy broad flats on the summit of the range, between the high, surrounding Cambrian hills. Their material was apparently derived from a source near at hand. Thus far mining has been only experimental.

HOT SPRINGS.

Three enormous hot springs exist in the Big Horn and Wind River basins, the waters of which are in greater or less degree charged with sulphur, and salts the nature of which is not determined. The springs are located on the Stinking Water just below the canyon between Rattlesnake Ridge and Cedar Mountain; on the Big Horn, 5 miles below the base of the Owl Mountains; and on the Little Wind River 3 miles below Fort Washakie.

The Stinking Water springs.—These are the present remnants of early geyser action. The original area was about 1 mile square. Within this, besides a heavy deposit of calcareous tufa, several old geyser cones still exist, from which, however, all traces of activity have long since departed. There are also the usual circular depressions from 10 to 30 or 40 feet deep and 50 to 100 feet in diameter, peculiar to such regions. The tufa now forms a broad flat on either side the river gorge, about 150 or 200 feet above the present stream level. The flat is limited by the higher hills of the Triassic sandstones and their débris of denudation, which constitute a rim 30 to 50 feet high. The Red Beds also formed the platform upon which the tufa layer was deposited, outcropping in the canyon walls with a general dip of 10° to 15° downstream, but showing some flexures, with a dip for a short distance in the opposite direction. The beds have been more or less altered, and deposits of foreign salts have taken place in certain layers while in others the rock itself seems to have been replaced by matter derived from the springs. The present seat of activity is limited to a number of springs, of greater or less volume, at the water's edge, or rising directly from the bottom of the river through the superincumbent waters. At high water nearly all the springs are covered. The temperature was not taken, but the water was warm, not hot. The waters, besides sulphuretted hydrogen, contain a greater or less amount of sulphuric acid and are otherwise considerably mineralized.

The Big Horn Hot Springs.—These occur in the axis of an anticline parallel with the Owl-Rattlesnake Range. Like the Stinking Water Springs, they reach the surface in the Triassic Red Beds. They were originally active for a mile or more along the anticline on both sides the present river channel, but now are chiefly confined to the eastern bank where a heavy deposit of calcareous tufa exists, extending along the stream for a half mile with a width varying between 100 and 300 feet. The largest spring flows from a circular hole in the steeply dipping Triassic strata, in diameter 20 to 25 feet, and of undetermined depth. The body of water coming to the surface through this spring is enormous, and so hot that cooling by passage through an open channel is necessary before it can be used for bathing purposes. Besides this duct, there are others leading to the river edge beneath and through the tufaceous bed. The waters are quite strongly impregnated with sulphur and with their high temperature are said to be most efficaceous in rheumatic and many other diseases. The springs are at all seasons above the level of the stream. They already have a wide local reputation and are visited yearly by numbers of invalids with reported satisfactory results.

The Fort Washakie Hot Spring.—This is situated in the valley of Little Wind River, its waters reaching the surface through Quaternary deposits; but the red sandstones of the Trias appear at short distances to the east and west and underlie the river débris at no considerable depth. Like the Big Horn Hot Spring this also is found at the axis of an anticline, the nature of which has already been described. The crater of the spring is several hundred feet across and of considerable depth, constituting an excellent swimming pool. The temperature is considerably lower than that of the Big Horn Hot Springs.

The waters of all three of the foregoing springs will doubtless display marked curative properties, but the Big Horn Spring stands highest in point of temptrature.

AGRICULTURE.

The agricultural possibilities of the Big Horn and Wind River basins are limited to local areas at the foot of the several mountain ranges, including both bench land and stream bottoms, and to the valleys of the larger streams in the central part of the basins, chief among them being the Wind River, the Big Horn, Stinking Water, Grey Bull, Wood River, and No Wood.

In the Big Horn basin the belt at the base of the mountains has a general width of 3 to 5 miles, which with the areas of Montana and Laramie shales along the stream bottoms from reduplication through folding, is very considerably increased. Below the line of the Laramie, however, the smaller streams run dry. In this belt, adjacent to the mountains, agriculture has already been carried sufficiently far to indicate a general success under similar conditions for much of the periphery of the basin. Grain and grasses, including alfalfa and timothy, grow in heavy crops wherever care is used in sowing, cultivation, and irrigation. Vegetables, excepting corn, and berries of all kinds may be raised with no more than the ordinary efforts in the productive portions of the West. Much of the present productive area is located on the Montana clays, but this is due to position—where water is available and the valley broad. The uplands are not generally of a topographic form to permit cultivation, being too rugged next to the mountains and too high and far removed from water in the more interior portions of the basins. There are localities, however, on both the east and west sides of the basin where considerable areas of this nature may be found, advantageously situated for crop growing. Of the foothill valleys the most highly cultivated and productive at present are those of Wood River, Grey Bull, Meeteetse Creek, Owl Creek and No Wood. In the central part of the Big Horn basin the Big Horn River, the Stinking Water and Grey Bull are the only streams which can be advantageously settled, the water of these streams alone being abundant all the year for the demands of agriculture. Away from these streams the basin is a vast desert, intensely heated in summer, wind-swept in winter, with hardly a spear of grass for grazing.

The productive area of that part of the Wind River basin on the route of reconnoissance is confined to a belt of 5 or 6 miles along the base of the Wind River Mountains, and to the Wind River valley, all else being even more barren than the center of the Big Horn basin. In the part adjacent to the Wind River Range the possibilities of agriculture are unexcelled. The bottoms of Popoagie Creek about Lander are uninterrupted in the stretch of hay, grain and vegetable fields, and well indicate what can be attained elsewhere along the range; here, again, the cultivated area is on Montana shales. Water in this belt is abundant. Along the southern base of the Owl Mountains there are only a few small springs, capable of irrigating a minimum acreage of land. The Wind River bottoms are capable of irrigation and present considerable acreage for agriculture. Nearly all the other portions of the basin are covered with the loose sands derived from the Tertiaries which there prevail.

East of the Big Horn Mountains and north, in Montana, the capabilities of the soil are well known, and farming is already in an advanced stage.

Artesian wells are possible in many parts of the Big Horn and Wind River basins.

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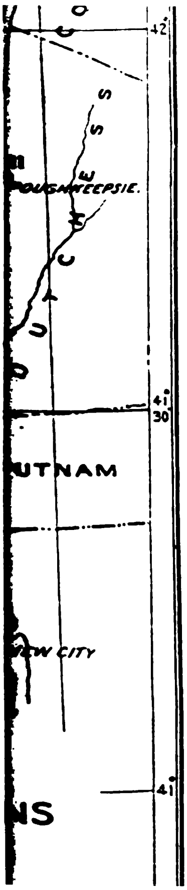
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DEPARTMENT OF THE INTERIOR

BULLETIN

OF THE

UNITED STATES

GEOLOGICAL SURVEY

No. 120

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

UNITED STATES GEOLOGICAL SURVEY

J. W. POWELL, DIRECTOR

J. C. Branner

THE DEVONIAN SYSTEM

OF

ASTERN PENNSYLVANIA AND NEW YORK

BY

CHARLES S. PROSSER

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
U. S. GEOLOGICAL SURVEY,
Washington, D. C., June 1, 1894.

SIR: I have the honor to transmit herewith for a bulletin of th Geological Survey a paper entitled "The Devonian System of Easter Pennsylvania and New York," by Mr. Charles S. Prosser.

CHAS. D. WALCOTT,
Geologist in Charge.

Hon. J. W. POWELL,
Director U. S. Geological Survey.

OUTLINE OF THIS PAPER.

The following paper is an account of a field investigation of the Devonian system of eastern Pennsylvania and New York. The work was undertaken under the auspices of the U. S. Geological Survey for the purpose of comparing the formations of this region with the more typical sections of the Devonian system in central and western New York.

The first field work was done in 1884, when a section was made from Port Jervis, along the line of the Monticello and Port Jervis Railroad, to Monticello, and through Sullivan County over exposures of the Catskill stage. In 1890 the various outcrops were studied along the Ulster and Delaware Railroad from Kingston to the Grand Hotel station, and along the Stony Clove and Catskill Mountain Railroad from Phœnicia to Kaaterskill and Palenville.

During the following year an examination was made of the Devonian exposures along the Lehigh River, in Carbon County, Pennsylvania, along the Delaware, Lackawanna and Western Railroad across Monroe County, then northeast over the Devonian to Port Jervis, when the Delaware River section was studied, and finally from Port Jervis up the Neversink Valley to Summitville, on the New York, Ontario and Western Railroad, in Sullivan County, New York.

The stratigraphy of the region was studied while thorough search was made for fossils in all the exposures examined. The collections of fossils have been carefully identified, and the data obtained in this way have been used in comparing the formations of this region with those of central New York. Such comparative study has shown differences in classification between the system used by the Pennsylvania survey and that of the New York standard series, and certain changes are suggested which will bring the correlation of the Pennsylvania section nearer that of the New York.

A change of location and an accession of duties have rendered it impossible to continue this study in eastern New York and central Pennsylvania, as had been planned by the writer; consequently it is deemed best to publish now the results of this portion of the investigation. As a result of this change the paper fails to show that fullness of detail and extent of scope which was desired by the writer; but it is hoped that the contribution may be of some assistance in working out the correlation of the Devonian system of this region.

TOPEKA, KANS., *July 5, 1893.* C. S. P.

THE DEVONIAN SYSTEM OF EASTERN PENNSYLVANIA AND NEW YORK.

By Charles S. Prosser.

INTRODUCTION.

By way of introduction a section will be described across the Devonian of the northeastern part of Monroe County, Pa., along the line of Brodhead Creek and the Delaware, Lackawanna and Western Railroad. The base of this section will rest on the Corniferous limestone well exposed in a railroad cut a mile south of East Stroudsburg and the termination will be in the Pocono, as exposed on the Pocono Mountains, from Mount Pocono to the ridge northwest of Tobyhanna.

STROUDSBURG, MONROE COUNTY, PA.—1475.[1]

One mile south of East Stroudsburg the Delaware, Lackawanna and Western Railroad makes a cut through an anticlinal axis of the Corniferous limestone, near the center of which is the Cauda-galli grit.[2] On the western side of Brodhead Creek, along the line of the New York, Susquehanna and Western Railroad, are exposures of the Corniferous limestone which in some respects show the folding better than those on the eastern side of the creek. A very small anticlinal fold occurs just south of the railroad bridge across McMichael's Creek, most of the rock being eroded so that only an occasional stratum shows. Then the rocks are for a short distance covered, when the limestone again appears with a dip of 30° from 10° to 15° east of south. Under this limestone, at the north end of the bluff, are very black Marcellus shales which have been excavated in the hope of finding coal. This structure shows it to be an overturned dip of the Corniferous. South of the limestone the rocks are covered for about 100 feet, when an anticlinal arch of limestone is exposed along the railroad for 105 feet. If the small ridge of limestone just south of McMichael's Creek be followed a short distance southwest, an exposure of shaly limestone will be found in which fossils are abundant. (1475 B 4.)[3]

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[1] Station number shown on map (Pl. I) accompanying this bulletin.

[2] This cut is well described by Prof. White in 2d Geol. Survey Penn., G^6, pp. 119, 265, 266, where it is stated that the Corniferous limestone has a thickness of about 200 feet, and that 50 feet of the Cauda-galli grit is exposed at the center of the arch

[3] This is probably the locality mentioned by Prof. White as one of the best in Monroe County for collecting Corniferous fossils (G^6, p. 120). On pp. 120, 121 he gives a list of eleven species from this and other localities in Monroe County. Also see paragraph on p. 266 in reference to the East Stroudsburg axis of Corniferous *just south of* Stroudsburg.

Down the ridge, toward the iron bridge, across the creek, opposite Elizabeth street, as well as at the point where the highway turns down the creek, is a ledge of the cherty Upper Helderberg (Corniferous) limestone containing corals and a few other fossils.

No. 1475 B 2—Bluish gray shales occur in McMichael's Creek, opposite Elizabeth street, the dip of which is between 25° and 30°, one clear stratum giving 27° to 28°, 20° or more west of north. The cleavage is to the south rather than to the southeast.[1] These shales are the transition from the Corniferous limestone up into the black Marcellus, and at this point 45 feet are exposed. No fossils were found.

No. 1475 B 1.—At the northeast end of the small ridge which rises a little north of Scott street, Stroudsburg, is an outcrop of blackish shales.[2] The ridge extends northeast and southwest, and is probably produced by one of the small folds. The rock has the lithologic character of the Marcellus shale of New York, and the fossils given below show this correlation to be correct. Fossils are comparatively abundant in this locality, and it is one of the few places which has yielded Marcellus fossils in northeastern Pennsylvania. Prof. White stated that this is the only locality at which he found fossils abundant in the Marcellus,"[3] and he provisionally identified the following genera: "*Spirifer*, *Chonetes*, *Productus*, *Orthis*, with many *crinoidal* fragments."[4]

Of course the *Chonetes* is the *C. mucronata* and the *Orthis* is probably *Leiorhynchus limitaris;* but the forms called *Spirifer*[5] and *Productus* are not so easily referred to their proper systematic position.

FAUNA OF No. 1475 B 1.

Leiorhynchus limitaris (Van.) Hall	(aa[6])
Chonetes mucronata Hall	(aa)
Leiopteria lævis Hall	(a)
Styliola fissurella Hall	(c)
Orthoceras subulatum Hall (?[7])	(r)
Pterinopecten dignatus Hall	(rr)
(?) Goniatites sp., crushed and imperfect fragment	(rr)

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[1] See G⁶, p. 269. In describing this locality Prof. White mentions "thin bands (3 to 5 inches thick) of a light drab colored rock," which is interstratified with the bluish gray shale at intervals of 3 to 5 feet. These bands are thin layers of limestone, showing the drab color only on the weathered surface.

[2] This is the outcrop mentioned by Prof. White, on pp. 115, 116, 270 of G⁶, and at the last reference we find this statement: "It has been quarried to some extent for riprap for the roads."

[3] G⁶, p. 115.

[4] Op. cit., p. 116.

[5] Prof. White stated: "*Spirifer umbonatus* was not recognized anywhere in the district (G⁶, p. 116), and Prof. Lesley, in commenting on the above fossils of Stroudsburg, said; "*Spirifera (Ambocœlia) umbonata*, the little shell so extremely abundant in western New York, was not seen by Prof. White anywhere between the Delaware and Schuylkill rivers." (Sum. Desc. Geol. Penn., Vol. ii, p. 1206, f. n. ;). By referring to the lists of Hamilton fossils in this paper, it will be seen that *Ambocœlia umbonata* (Con.) Hall, is a common species in northeastern Pennsylvania. It is second in abundance in the exposure a short distance above Gravel Place, 2½ miles above Stroudsburg.

[6] The following characters are used to indicate the abundance of the species: aa = very abundant, a = abundant; cc = very common, c = common; rr = very rare, r = rare.

[7] (?) following the name of a species indicates that the specific identification is in doubt; (?) preceding the generic name indicates that the generic identification is doubtful.

Along the line of the Delaware, Lackawanna and Western Railroad, north of East Stroudsburg, there has been considerable folding of the rocks, and the Upper Helderberg (Corniferous limestone) appears again as shown on Prof. White's geological map of Monroe County. Especially is this discernible in a small cut a little above the flag crossing on the western side of the track, about three-fourths of a mile north of the station and in a field on the eastern side of the railroad a little farther north.

GRAVEL PLACE, MONROE COUNTY, PA.—1475 C 2.

At a point 2.7 miles north of the Stroudsburg station of the New York, Susquehanna and Western Railroad is its junction with the Delaware, Lackawanna and Western Railroad. A short distance farther north, just beyond the point where the Delaware, Lackawanna and Western crosses the highway, is an exposure of rather coarse arenaceous shales on the northeast side of the railroad. Here fossils are quite abundant, especially *Vitulina pustulosa* Hall. The dip of the shales near the top of the bluff is between 22° and 23°, about 20° west of north. The rocks cleave strongly between 20° and 30° east of south, and the position of the fossils shows that it is cleavage passing across the line of bedding.

FAUNA OF NO. 1475 C 2.

Vitulina pustulosa Hall	(aa)
Over fifty specimens were collected, some of which are very perfect, showing the pustulose character very nicely.	
Ambocœlia umbonata (Con.) Hall	(c)
Phacops rana (Green) Hall	(r)
Spirifera mucronata (Con.) Billings	(r)
(?) Nyassa arguta Hall	(rr)
Broken and imperfect specimen.	
Spirifera granulifera Hall	(rr)
Chonetes deflecta Hall	(r)
Modiomorpha subalata (Con.) Hall	(rr)
Pterinea flabellata (Con.) Hall	(rr)
Leiorhynchus multicosta Hall	(rr)
Modiomorpha concentrica (Con.) Hall ?	(rr)
Specimen broken and crushed so it is not possible to be absolutely sure of specific identity.	
Pleurotomaria sp	(rr)
Crinoid (calyx)	

The lithologic character of the rocks is that of the moderately coarse arenaceous Hamilton shales of central New York, and the fauna is undoubtedly Hamilton.

No. 1475 C 3.—The hills on the northeast side of the railroad are quite steep, and above Gravel Place, at a point opposite that at which the railroad crosses the highway for the third time, is an exposure of arenaceous shales, the lithologic character of which is about the same as that of C2, and fossils are common; *Palæoneilo constricta* (Con.) Hall occurs, and *Spirifera mucronata* is comparatively abundant.

BRODHEAD CREEK SECTION.

No. 1475, C1.—In Brodhead Creek, at Smith and Miller's mill (formerly Stokes' and also Wyckoff's), a little below Gravel Place, is an exposure of Marcellus shale of a bluish gray tint with drab markings, apparently belonging to the lower Marcellus. The dip is west of north, and in two places between 10° and 20°. No fossils were found.[1]

On the highway west of the creek, near the top of the small ridge, south of the 3-mile board, are bluish black shales by the roadside, probably Marcellus, while on the ridge north of the sign-board and house the Hamilton appears.

No. 1475 C 5.—Continuing north along the Stroudsburg and Spragueville highway, at a point a short distance south of the house of E. Bonynge, is an exposure of arenaceous slightly calcareous shale by the roadside. Fossils are very abundant at this horizon, especially Corals and Crinoid stems, and numerous specimens of Brachiopods. The rock when weathered becomes rotten and filled with perforations left by the solution of the Corals and Crinoid stems.

FAUNA OF NO. 1475 C 5.

Tropidoleptus carinatus (Con.) Hall	(rr)
Atrypa reticularis (Linné) Dalm	(c)
Spirifera fimbriata (Con.) Hall	(a)
Spirifera sculptilis Hall	(a)
Spirifera mucronata (Con.) Bill	(c)
Spirifera medialis Hall (?) or Spirifera macronota Hall (?)	(rr)
Specimen with very high hinge area, but poorly preserved in other respects.	
Cyrtina hamiltonensis Hall	(r)
Orthis vanuxemi Hall	(c)
Nucleospira concinna Hall	(c)
Athyris spiriferoides (Eaton) Hall	(c)
Chonetes coronata (Con.) Hall	(rr)
Strophodonta perplana (Con.) Hall (?); it is possible these internal impressions are S. demissa (Con.) Hall	(rr)
Leiorhynchus multicosta Hall (?)	(rr)
Poorly preserved specimen.	
Cypricardinia indenta (Con.) Hall	(c)
Conocardium sp	(rr)
Phacops rana (Green) Hall	(c)
Platyceras sp., two exfoliated specimens which may be compared with P. carinatum Hall	
Actinopteria decussata Hall (?)	(r)
The rays are regularly interrupted by the concentric striæ, as in the above species.	
Mytilarca (Plethomytilus) oviformis (Con.) Hall	(rr)
Corals	
Bryozoa	

NO. 1475 C.

Phacops rana (Green) Hall	(rr)
A very perfect specimen from the roadside between No. 1475 C 5 and the *bridge* over Brodhead Creek.	

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[1] See p. 270, G 6.

After describing the locality from which the above species were collected, Prof. White said: "There can be little doubt that this stratum represents the Tully limestone horizon of the New York Reports, and it thus becomes a valuable guide in correlating and classifying the rocks of the district."[1]

Again, the same exposure is described more fully under the geology of Stroud Township, where the professor states that the rock is "perforated in every direction with the holes left from the removal of corals and other calcareous remains by solution.

"Fossil shells are very abundant, *Spirifer*, *Tropidoleptus*, and *Avicula* being very numerous, while crinoidal fragments also abound."[2]

The Pennsylvania horizon under consideration is usually a calcareous shale, instead of a massive limestone, and does not lithologically resemble the Tully limestone of central New York. But far more important than its lithologic character is the fact that in this horizon the species which are especially characteristic of the Tully limestone are absent, while those of the Hamilton constitute its fauna.

While considering the correlation of this zone it is well to take into account the known eastern extension of the Tully limestone of central New York. The farthest east Vanuxem found this formation was in Chenango County, "at the northwestern part of Smyrna, on the road to De Ruyter village, where the road crosses the west branch of the Chenango."[3]

Prof. Emmons in 1846 discussed the absence of the Tully limestone in eastern New York, and I see no reason for dissent from his views. He said: "The Hamilton shales, however, are limited above, or superiorly, by a dark-colored mass which has been called the Tully limestone. This would seem a sufficiently distinct limit if the limestone extended eastward; but as it is absent in the river counties, and scarcely extends beyond the central counties in this direction, the group is still left without a distinct line of demarcation in nearly one-half of the State. We are therefore obliged to resort to a careful study of its fossils in order to define the limits which the mass occupies."[4] Also "in Albany and Schoharie counties it [Tully limestone] is unknown."[5]

In the summer of 1886 the writer studied this region, and near Upperville, in Smyrna Township, reported limestone layers 25 feet in thickness separated by calcareous shales.[6] Prof. S. G. Williams reports this same locality as "the easternmost point at which I have found anything answering to the Tully."[7] Finally, Prof. H. S. Williams says: "The Tully limestone is a zone of argillaceous limestone ranging from a few feet to over 50 feet in thickness, the outcrop of which crosses the middle counties of New York State from Ontario to Chenango counties, but it is not clearly recognized in the sections south of New York."[1]

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[1] G6, p. 109.

[2] Op. cit., p. 271.

[3] Geol. New York, Pt. III, 1842, p. 292; also, see p. 164.

[4] Agriculture of New York, Vol. I, p. 183.

[5] Ibid., p. 186.

[6] Proc. Am. Asso. Adv. Science, Vol. XXXVI, 1887, p. 210.

[7] Sixth Ann. Rept. State Geol. [New York], 1887, p. 18, also see map on "Geographical distribution of the Tully limestone in central New York," accompanying the paper.

No. 1475 C4.—About one-fourth mile farther north than the outcrop of the coral zone the road crosses Brodhead Creek, and under the bridge, as well as along the west bank of the creek below the bridge, are exposures of rather fine argillaceous shales of bluish color and moderately fossiliferous.

FAUNA OF No. 1475 C4.

Nuculites triqueter Con	(rr)
Phacops rana (Green) Hall	(rr)
Palæoneilo sp., a broken specimen; probably P. constricta (Con.) Hall	(rr)
Leiorhynchus multicosta Hall	(rr)
(?) Crania, imperfect specimen of possibly C. hamiltoniæ Hall	(rr)
(?) Streptorhynchus sp., broken specimens of what are apparently S. chemungensis (Con.) Hall, agreeing most nearly with var. arctostriata Hall	(rr)
Orthonota (?) parvula Hall	(rr)
The proportions and other characters of the shell agree perfectly with the description and figures of this species.	
(?) Modiomorpha mytiloides (Con.) Hall	(rr)
Two valves of small Lamellibranch, which are possibly this species.	
(?) Productella sp., two small impressions	(rr)
Chonetes deflecta Hall (?)	(rr)
Not clearly preserved, but the spines along the hinge line are distinct.	
Loxonema sp., only one perfect volution; but probably L. hamiltoniæ Hall	(rr)
Lingula sp	(rr)
Grammysia sp	(rr)
Orthoceras sp	(rr)
Fragments of two shells belonging to the Pectinidæ	(rr)
Crinoid stems	(c)

This outcrop is one of the typical exposures of Genesee shale mentioned by Prof. White, who says: "The Genesee slate outcrop crosses Brodhead Creek at the road crossing, 1¼ miles below Spragueville, where it is seen as a bluish-black, sandy slate, dipping quite rapidly to the northeast."[2]

From the above list of fossils it will be seen that the fauna is not that of the Genesee shale, but of the Upper Hamilton. Moreover the shales have no lithologic resemblance to the typical Genesee of central and western New York, and the same criticism applies to this correlation that has already been made in reference to the coral zone, or so-called Tully limestone. In reference to the eastern extension of the Genesee shale in New York, Vanuxem said: "The Genesee slate was not distinctly recognized east of the town of Smyrna, in Chenango County, probably owing to intermixture with sandstone, and its fossils not having been noticed."[3] But under the description of Chenango County it is mentioned at North New Berlin.[4] In 1883 the writer carefully studied the exposures along the valley of the Unadilla River to New Berlin and then across the hills to Oneonta, but failed to find any evidence of the Genesee black shale or its fauna. Near Smyrna were found black argillaceous shales some 20 feet in thickness.[1]

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[1] Bull. Geol. Soc. Am., Vol. I, 1890, pp. 489, 490.

[2] G^6, p. 271; also see p. 108 under the distribution of the Genesee.

[3] Geol. of New York, Pt. III, p. 169.

[4] Ibid., p. 292.

No. 1475 C6.—Bluish, arenaceous shales by the roadside, just above the Delaware, Lackawanna and Western Railroad crossing, about one-half mile south of Spragueville. The rock is rather micaceous, and is composed of quite coarse arenaceous shales with some sandstone and thin shaly layers in which are fossils, so that, lithologically considered, it is quite different from the darker and more argillaceous shales of the so-called Genesee below.

FAUNA OF No. 1475 C6.

Tropidoleptus carinatus (Con.) Hall	(rr)
Homalonotus dekayi (Green) Emm	(rr)
Paracyclas lirata (Con.) Hall	(rr)
Palæoneilo maxima (Con.) Hall	(rr)
Leptodesma rogersi Hall (?)	(rr)

There are three specimens which agree well with some of the figures of the above species, and a fourth specimen is narrower, more oblique, and resembles somewhat fig. 13, Pl. XXI of L. spinigerum (Con.) Hall. Prof. Hall says, "specific distinction is not always apparent" (Geol. Surv. N. Y., Palæontology, Vol. V, Pt. I, Lamellibranchiata, I, p. 177).

Spirifera mesacostalis Hall	(r)
Pleurotomaria sp	(r)
Orthoceras sp	(rr)
Goniatites sp.	(rr)

These fossils are from the lower part of what Prof. White has described and mapped as Chemung, and from the locality which is mentioned in his description of Stroud Township. The professor wrote: "Along the county road, about one-half mile below Spragueville, the Chemung rocks are seen in cliffs of gray fine-grained sandstone, quite fossiliferous."[2] The fauna is not that of the typical Chemung, but rather appears to be that of the Ithaca group which forms at Ithaca, N. Y., the middle of the Portage stage. Bearing upon this question is the statement of Prof. James Hall to the Geological Society at Rochester, that he believed "the Chemung formation went no farther east than Delaware County [New York]."[3] Prof. White mentions "*Spirifer disjunctus*"[4] as occurring in the Chemung of northeastern Pennsylvania. Very careful search was given to the rocks called Chemung, as well as to the overlying ones, yet no specimen of this well-known Chemung species was found. In places numerous specimens of *Spirifera mesastrialis* Hall were found, which on hasty examination might be mistaken for the typical Chemung species.

No. 1475 C7.—On the third hill below Spragueville, to the east of the road, are found ledges of sandstone, containing numerous specimens of winged Lamellibranchs (? *Actinopteria* cf. *boydi*), which weather to a light gray color, but are bluish on a fresh fracture. This may be the "coarse yellowish-gray sandstone" mentioned by Prof. White as occurring 200 feet below the top of the Chemung, near Spragueville.[1]

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[1] Proc. Am. Asso. Adv. Science, Vol. XXXVI, p. 210.

[2] G^4, p. 272.

[3] As reported in the Rochester Post Express, August 16, 1892.

[4] Ibid., p. 105.

FAUNA OF NO. 1475 C7.

Tropidoleptus carinatus (Con.) Hall	(rr)
Spirifera mesacostalis Hall	(rr)
Homalonotus dekayi (Green) Emm	(rr)
Paracyclas lirata (Con.) Hall	(rr)
(?) Actinopteria cf. boydi Hall	(c)
Palæoneilo emarginata (Con.) Hall var	(rr)
Rhynchonella sp	(r)
Nuculites sp	(rr)

No. 1475 C8.—Exposures of sandstone and shales near the summit of the second hill below Spragueville, on eastern side of the road. On the southern side of the ridge toward the summit is a ledge of rather massive sandstone. A little higher are shaly layers, some of which cleave very smoothly, and in these shales are some fossils. Lamellibranchs are most abundant, but *Spirifera mesastrialis* Hall is also present. The fossils only occur in a thin layer in shales that are generally nonfossiliferous.

FAUNA OF NO. 1475 C8.

Nuculites oblongatus Con	(a)
Paracyclas lirata (Con.) Hall	(c)
Palæoneilo plana Hall	(aa)
Prothyris lanceolata Hall	(r)
Microdon (Cypricardella) gregarius Hall (?)	(r)
Palœoneilo emarginata (Con.) Hall var	(c)

There are small specimens, which are apparently the same as the small shell figured by Prof. Hall on pl. 50, fig. 11, from Ithaca as this species. But there are larger specimens of this form, and these differ from P. emarginata in having the posterior margin only slightly sinuate, instead of deeply, and the umbonal slope is faint, forming a shallow depression which nearly disappears toward the umbo. This character is very marked when compared with the typical P. emarginata with its conspicuous emargination. However, the shell is decidedly of the P. emarginata type, and although some authors might regard the variation as of specific rank, I prefer to call it only varietal.

Nuculites cf. cuneiformis Con	(c)

The specimens are higher than most of Nuculites (except fig. 16, pl. 47) and in proportions suggest Goniophora; but they possess a clavicular ridge and teeth, and so are clearly Nuculites. There are smaller specimens associated with the larger, which are probably the young, as suggested by Dr. Charles E. Beecher.

Leda diversa Hall	(rr)
Cf. Prothyris planulata Hall and Orthonota carinata Hall	(rr)

Difficult to decide to which of these species the two specimens belong.

Orthonota (?) parvula Hall (?)	(rr)

Poorly preserved specimen.

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[1] G^6, p. 272.

Spirifera mesastrialis Hall	(c)
Spirifera mesacostalis Hall	(rr)
Nucula corbuliformis Hall	(rr)
Orthonota undulata Con	(rr)
Tentaculites sp	(rr)
Lingula sp	(rr)
Orthoceras sp	(rr)
Pleurotomaria or Cyclonema sp	(rr)

The rocks from which the above fauna was obtained are a typical exposure of those which have been called Chemung by Prof. I. C. White in eastern Pennsylvania. In describing this exposure Prof. White said: "Along the county road, about one-half mile below Spragueville, the Chemung rocks are seen in cliffs of gray fine-grained sandstone, quite fossiliferous;"[1] and in his account of the geologic formations he further stated that: "It was impossible to identify any of the beds between the base of the Catskill and the top of the Hamilton with the Portage series of other portions of Pennsylvania, either on lithological or palæontological grounds, and hence I have applied the name Chemung to the entire interval, preferring to regard the Portage series as absent from this district."[2] Several reasons are given for this correlation, that of first importance being "the occurrence of characteristic Chemung fossils throughout the entire interval."[3] Later, in describing the geology of the Susquehanna River region, Prof. White stated that probably the beds in the lower part of the Chemung "are the equivalents of the Portage beds in New York;"[4] and in a letter dated February 22, 1892, emphasizes the fact that he wishes the above statement to apply to Monroe and Pike Counties, and that the lower part of the terrane called Chemung in those counties corresponds to the Portage of New York.

The fauna of this formation is not characteristic of the Chemung stage of southern, central, and western New York, or even of the highest fossiliferous pre-Carboniferous rocks of southern Pennsylvania and western Maryland. On the contrary, it is a modified Hamilton fauna, similar to the faunas that occur in central and eastern New York in the Portage, especially after the Tully limestone and Genesee shale have disappeared. It hardly seems to be so late as the "Ithaca group," but rather approaches the earlier modified stages of the Hamilton fauna, as possibly the *Paracyclas lirata* stage of Dr. H. S. Williams, which is found well developed above the horizon of the Genesee shale at Oneonta and Norwich in central New York.[5]

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[1] G^6, p. 272.

[2] Ibid., p. 104.

[3] Ibid., p. 104.

[4] G^7, 1883, p. 68; and see pp. 70 and 228 for similar statements.

[5] See Prof. H. S. Williams in Proc. Am. Assoc. Adv. Sci., Vol. XXXIV, p. 225 and chart; and Prosser, ibid., Vol. XXXVI, p. 210. This fauna characterized the Oneonta group of Conrad (not Vanuxem, who applied the same name to the overlying gray and red sandstones and shales), which was composed of bluish shales with some sandstones and abundantly fossiliferous. The zone is well exposed in the quarry at the foot of the hill west of Oneonta, at Norwich in the quarry near the reservoir, and in the lower part of the high hill west of the village. For Conrad's description of the "group" see Ann. Geol. *Rept., N. Y., 1841*, pp. 30, 31, 50, and 53.

It is true that *Spirifera disjuncta* Sow. is reported from this formation;[1] and if the specimens were correctly identified that would be almost conclusive proof of its Chemung age. But the writer has failed to find this species on the eastern side of the Pocono and Catskill mountains and is inclined to think that *Spirifera mesastrialis* Hall, an allied species which is not uncommon, is the one reported for *S. disjuncta*, especially since the Cascade section of Susquehanna County, Pa., has been reported to contain well-known Chemung shaly and flaggy strata full of *Spirifera disjuncta*.[2] When the section was examined, in company with Dr. H. S. Williams, it was found that the common species was *S. mesastrialis*, which had evidently been mistaken for the *S. disjuncta*.[3]

After considerable field work in southeastern New York and northeastern Pennsylvania, the conclusion is reached that the marine faunas terminated either slightly in advance or soon after the appearance of the Chemung stage. In central and southern Pennsylvania and western Maryland the conditions seem to have been more favorable, and *Spirifera disjuncta* with other Chemung species occurs in rocks which are stratigraphically equivalent to the unfossiliferous beds farther toward the northeast. The geological collections of Johns Hopkins University contain a few specimens of *Spirifera disjuncta* from near Cumberland, Md.,[4] and Profs. Claypole,[5] White,[6] Stevenson,[7] Ashburner,[8] and Meek[9] have reported the species from a number of localities in Pennsylvania and Virginia.

The shales and sandstones of the Chemung series, which contain the highest fossil shells seen by Prof. White, are succeeded by greenish-gray, thick-bedded sandstones—the Starucca sandstone of Prof. White—which at that time he considered the base of the Catskill.[10] Later, Prof. White states "it seems probable that the 600 feet of grayish-green beds at the top of the Chemung in Pike and Monroe, which in G6 were referred to the Catskill under the name of Starucca beds, may be the equivalent of a portion of the Upper Chemung of this district [Susquehanna River region], and therefore erroneously referred to the

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[1] G6 p. 105.

[2] G^4, p. 78.

[3] See the remarks on the Cascade section by Dr. Williams, who states: "When I examined the section I found no trace of several of the species cited, and only rare and imperfect specimens of *Spirifera disjuncta* and the last stage with *Rhynchonella contracta*; but all the mass of the fauna was *Spirifera mesastrialis* and its legitimate associates, which is a lower fauna belonging to the more eastern part of this general area. The difference between the two *Spiriferas* appears at first glance slight; but they are clearly distinct." (Proc. Am. Assoc. Adv. Sci., Vol. xxxiv, p. 231).

[4] See list of Chemung fossils from Maryland, by Charles R. Keyes, in Johns Hopkins Univ., circulars, Vol. xi, December 1891, p. 29, which specimens, through the courtesy of Dr. W. B. Clark, have been personally examined.

[5] F^2, pp. 74, 77, 289, 291.

[6] T^3, pp. 98, 183, 194.

[7] T^2, pp. 76, 80 133. 212. 214. 216, 225, 226; and Amer. Geol., Vol. ix, pp. 10, 26.

[8] F, pp. 221. 225.

[9] Bull. Phil. Soc. Washington. Vol. ii; Appendix, art., viii, p. 34.

[10] G^6, pp. 102, 103. See G^4, 1881, pp. 59, 70, 73, and fig. 10 on p. 77 for the original description of *this zone.*

Catskill in G6."[1] In the letter mentioned above Prof. White writes that 600 feet of sandstones, which in G6 were put in the Catskill, should be added to the Chemung. Referring to the difficulty in separating the Chemung and Catskill, the professor says: "I think the only possible separation of Chemung and Catskill is that founded upon physical characteristics, and in my opinion we should separate them at the horizon of the lowest red beds, for these seem to come in at about the same general zone everywhere, and it is the only possible means of separation." These sandstones are well exposed at Spragueville and in the Delaware, Lackawanna and Western Railroad cut just north of the station. In this cut is a layer of red shale, in the midst of the sandstone, which is the first or lowest red bed seen in the section.

The second railroad cut, just north of the Brodhead Creek railroad bridge, is in the New Milford red shale, which is now regarded by Prof. White as forming the base of the Catskill.[2] The red shales alternate with gray shales and sandstones as far as the "High Bridge" over the west branch of Brodhead Creek, when the Delaware River flags of White are reached.[3] These flags do not consist entirely of gray shales and sandstones, but reds alternate with the grays.

No. 1475 E2.—At the southern end of the first railroad cut north of the "High Bridge," a slab of greenish-gray sandstone was found which contained many impressions of *Orthonota* (?) *parvula* Hall,[4] a species which occurs in the upper Hamilton shales of Schoharie County, N.Y., as well as frequently in the argillaceous Hamilton shales of central and western New York. There is also a calcareous (?) breccia which contains fragments of Brachiopod shells, as *Spirifera* sp., and fish bones. The dip in the cut is more than 20° north. The rocks of the railroad cut are red, gray, and greenish shales, alternating with sandstones. At the northern end of the cut, near the sign "whistle," are coarse, grayish, arenaceous shales in which fern stipes occur, and one poorly preserved frond of *Archæopteris minor* Lx. (?) was found.

No. 1475 E1.—A short distance south of the Henryville Station is a railroad cut through the red shale which is called the Montrose red shale by Prof. White.[5] The dip is about 14°, between 20° and 25° west of north. In the red shale of this cut Prof. White reported "vast numbers of fronds of *Archæopteris Jacksoni*."[6]

In another place the rarity of fossils in the Catskill is commented upon and the importance of this locality noted as follows: "Plant remains are of very rare occurrence, the only locality in the district where any determinable forms were seen being a short distance below Henryville in a cut on the Delaware, Lackawanna and Western Railroad. There, near the base of the Montrose red shale, great numbers of *Archæopteris Jacksoni* occur."[1]

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[1] G^7, p. 73.

[2] G^6, pp. 101, 273.

[3] G^6, p. 100.

[4] The first published reference to this discovery is in the Amer. Geol., Vol. ix. p. 15, footnote. Dr. Charles E. Beecher has seen these specimens and agrees with the above identification. Dr. J. M. Clarke has kindly compared some of the specimens with the types in the New York State Museum at Albany, and writes: "I see no reason why the shells in question should not be regarded as *Orthonota* (?) *parvula*, in accordance with your identification; I have compared them with the types of *O.* (?) *parvula* and can find no distinctive characters."

[5] G^6, pp. 320, 98.

[6] Ibid., p. 320.

Careful search failed to reveal a fragment of an *Archæopteris*, and the only fossils seen were the irregular fucoidal (?) markings that are frequently found in the red shales of the Upper Devonian.

No. 1475 Fl.—Near the southern end of the second railroad cut north of Henryville, in green argillaceous shale, just on top of red shale, a fragment of a brachiopod shell was found. At the northern end of the cut, in greenish, somewhat arenaceous shales, 1½ feet above red shale, are fossils. The cut shows one of the small rolls that were frequently noticed along the line of the railway. These rocks are probably in the formation called "the Honesdale sandstones" by Prof. White, although near the transition from them to the underlying Montrose shale. Above this horizon no fossils were seen in the higher rocks, except indeterminable fragments of plants, and this is the highest fauna that has yet been found in Monroe and Pike Counties.

FAUNA OF NO. 1475 Fl.

Spirifera mesacostalis Hall.

Ten specimens, part of them broken, from a thin layer of greenish, moderately arenaceous shale. It is the only fossiliferous stratum seen in these beds. Five specimens in good condition were found, so there is no doubt as to their specific identification.

Leda diversa Hall (?).

Possibly the specimen is L. brevirostris Hall, since it is not so long as the typical L. diversa, but on the contrary it is not so high as the typical L. brevirostris.

Spirifera mesastrialis, which is reported from the Hamilton of Schoharie County, N. Y.,[2] is an abundant and well-known species of the middle zone of the "Ithaca group" at Ithaca, and is also found in the lower Chemung, farther south in southern central New York,[3] and northern Pennsylvania,[4] while *Leda diversa* is a Hamilton species of eastern and central New York. The fossils seem to indicate that these shales are hardly younger than the lower Chemung and they might be still older, since the specimens of *Spirifera mesastrialis* do not appear to be the variety which is found in the lower Chemung of southern New York; but, on the contrary, the form found in the older rocks of the Portage.

The nearest correlation to the above is that of Prof. Stevenson in his vice-presidential address before Section E of the American Association, in 1891, when he drew the line separating the Catskill from the

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[1] G⁶, p. 103.

[2] Geol. Survey N. Y., Paleontology, Vol. IV, Pt. I, p. 417.

[3] Bull. U. S. Geol. Surv., No. 3, pp. 17, 22, 24.

[4] Proc. Am. Asso. Adv. Science, Vol. XXXIV, p. 231.

Chemung, between the Montrose sandstone above and the Montrose red shale below,[1] which is at a part of the series not distant from the horizon in which the *Spiriferas* were collected above Henryville.

Above this horizon coarse, gray sandstones and shales alternate with reddish shales. A thick mass of the red shale is well exposed in the railroad cut just west of Oakland. The cut below Mount Pocono shows coarse, gray sandstone with fragments of fossil plants, thin, bluish, argillaceous shales, breccia, and red shales, while in places the coarse, gray sandstone contains quartz pebbles, and is probably near the horizon of Prof. White's Cherry Ridge conglomerate, about 500 feet below the top of the Catskill.[2]

In general structure and lithologic appearance, these rocks are very similar to the typical Catskill of the Catskill Mountains.

On the summit of the Pocono plateau, about 2½ miles north of Tobyhanna, is a massive conglomerate which is considered by Prof. White as the Mount Pleasant conglomerate at the base of the Pocono.[3]

POCONO CREEK AND POCONO KNOB SECTION.

After the section along the line of Brodhead Creek and the Delaware, Lackawanna and Western Railroad had been studied, another one was made from Stroudsburg along Pocono Creek, through Bartonsville and Tannersville to Pocono Knob. The same series of formations was crossed by this latter section as by the former; but in general the exposures are not so good, and the conditions not so favorable for a careful study of the stratigraphy and palæontology of the region. However, the general results were about the same, as will be seen from the lists of fossils and descriptions of different localities.

No. 1475 D—2.—On the highway from Stroudsburg to Bartonsville, a little below the Tanite Company's mill, is an outcrop of bluish, arenaceous shale, which is quite fossiliferous, *Tellinopsis subemarginata* (Con.) Hall, being the most abundant species.

FAUNA OF NO. 1475 D—2.

Tellinopsis subemarginata (Con.) Hall	(aa)
Spirifera mucronata (Con.) Hall	(rr)
Leiorhynchus multicosta Hall	(rr)
Ambocœlia umbonata (Con.) Hall	(rr)
Chonetes lepida Hall	(rr)
Chonetes sp., probably C. setigera Hall, although two specimens approach C. scitula Hall in form	(c)
Palæoneilo constricta (Con.) Hall	(rr)
Lunulicardium fragile Hall	(r)
Lingula sp.	(rr)
Orthoceras sp.	(r)
Actinopteria cf. muricata Hall	(rr)

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[1] Am. Geol., Vol. IX, p. 14.

[2] G^6, p. 78.

[3] G^6, pp. 90, 329.

No. 1475 D—3.—Down the bank, just opposite the Tanite works, by Pocono Creek, the shales are blue and more arenaceous than those by the roadside.[1]

FAUNA OF NO. 1475 D—3.

Ambocœlia umbonata (Con.) Hall	(r)
Chonetes mucronata Hall	(r)
Dalmanites boothi (Green) Hall (?)	(rr)

The lithologic character of the shales and the fauna show that these exposures are typical Hamilton rocks.

No. 1475 D1.—Exposures along Pocono Creek, just north of the covered bridge at Bartonsville. The dip is about 12° and the direction 25° west of north. The ledges consist of sandstones, frequently of irregular bedding with an approach to concretionary structure, similar to those along the highway below Spragueville, and a little above the railroad crossing, alternating with somewhat bluish shales, and varying from 1 to 2 feet in thickness. The small concretions in the shales usually contain fossils. Nearly all the fossils are small forms which occur sparingly in the shales, more frequently on the surface of the sandstones, but are most common in the shaly arenaceous layers.

FAUNA OF NO. 1475 D1.

Tropidoleptus carinatus (Con.) Hall	(rr)
Paracyclas lirata (Con.) Hall	(r)
Spirifera mesacostalis Hall	(a)
Chonetes setigera Hall (?)	(aa)
Part of the specimens are very near to the form of this species found in the "Ithaca group" at Ithaca, N. Y.; others are in some of the characters suggestive of C. lepida Hall, there being two rather stronger ribs and in one specimen five intermediate ones; while a few specimens have the elongated form of C. scitula Hall, but they do not have the numerous plications of that species.	
Leda diversa Hall	(rr)
Rhynchonella stephani Hall	(c)
Leiorhynchus mesacostalis Hall	(rr)
Nuculites oblongatus (Con.) Hall (?)	(rr)
Distorted, but pretty surely this species.	
Microdon (Cypricardella) bellistriatus (Con.) Hall	(rr)
Modiomorpha subalata (Con.) Hall, var. chemungensis Hall (?), broken and distorted specimens which closely resemble this variety	(r)
Actinopteria cf. boydi (Con.) Hall	(rr)
Pleurotomaria sp	(rr)
Platyceras sp	(rr)
Spirifera sp., large impressions imperfectly preserved which may be compared with S. mesastrialis	(rr)

This fauna occurs in what was called "Chemung" by Prof. White, and corresponds to the exposures along the highway below Spragueville and to those above the railroad crossing.

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[1] This exposure is mentioned by Prof. White, who says: "Just opposite the Tanite Company's *works, a bluff of Hamilton* rocks, 65 feet high, rises almost vertically from the bed of Pocono." G^{4} [illegible].

No. 1475 D—1.—Hill southwest of Bartonsville, perhaps a half mile, is composed of coarse arenaceous shales in which fossils are very rare.

As stated by Prof. White, the greenish gray sandstones of the Starucca appear about 1 mile above Bartonsville,[1] and then sandstones and red shales alternate along the road until Tannersville is reached.

No. 1475 D2.—The abrupt southeast side of Pocono Knob, northwest of Tannersville, is composed of red, arenaceous shales, No. 4 of Prof. White's Pocono Knob section.[2]

This shale belongs in the professor's "Cherry Ridge" group, and is in the upper part of his Catskill series. The arenaceous shale contains broken pieces of the fucoid (?) which is frequently found in the red arenaceous shales and sandstones of New York and Pennsylvania. Several specimens were seen on the talus below the brow of the knob.

No. 1475 D3.—Above the shale is a conglomerate layer (White's lower conglomerate) followed by reddish sandstone and arenaceous shale, and then the upper conglomerate, which is a very massive stratum, containing quartz pebbles, and pebbles of the red and blackish shale. Prof. White reports "many fish fragments" from near the base of the lower conglomerate (No. 3 of the knob section);[3] but they were not found in my hasty examination of this locality.

LEHIGH RIVER SECTION.

In connection with the sections along the Delaware, Lackawanna and Western Railroad, and the Pocono Creek through Bartonsville and Tannersville, it is interesting to compare one, farther southwest along the Lehigh River through Weissport and Bowmans station.

Prof. White's geological map of Pike and Monroe counties[4] extends southwest of Monroe County into Carbon County and across the Lehigh River. Later, Arthur Winslow constructed a section from Wilkesbarre to the Lehigh Gap, mainly along the Lehigh River; and accompanying the report is a map, showing the geological formations along the line of the section.[5]

On Prof. White's map, Weissport is shown as situated mainly on an anticlinal of Hamilton rocks, just reaching the edge of the Genesee; the Chemung being exposed still farther to the southeast. In describing the distribution of the Genesee shale, Prof. White states that one band reaches the Lehigh River, a short distance above Lehighton Station on the Central Railroad of New Jersey, and another crosses the river just below Lehighton Station on the Lehigh Valley Railroad.[6]

The above description is repeated by Prof. Lesley in his final report.[7]

Mr. Winslow colored all of the central part of the anticlinal fold as

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[1] G^6, p. 103.

[2] G^6, p. 315.

[3] G^6, p. 316.

[4] Accompanying the geology of Pike and Monroe counties. 2d Geol. Surv. Pa. G^6.

[5] Ibid., An. Rep., 1886, Pt. IV, the Lehigh River cross-section, p. 1331.

[6] G^6, p. 108.

[7] Sum. Desc. Geol. Penn., Vol. II., p. 1327.

Genesee shales flanked by the Chemung and Portage. In describing this outcrop Mr. Winslow said: "South of Lock No. 7, the Genesee shales are exposed for over a mile to below Lock No. 9 at Weissport. Their fissile and broken character is well shown here; in places they are so black that the rock looks more like weathered coal or highly carbonaceous shale,"[1] while it is further stated that "shells are numerous in the Chemung and Genesee outcrops (VIII) near Weissport.[2]" The thickness of the Genesee is given as 200 feet by Prof. White on the Lehigh River,[3] and the Hamilton as 760 feet.[4]

The exposures at Lehighton and Weissport were carefully studied, after the Hamilton of Pike and Monroe counties, Pa., and eastern New York had been examined, in order to determine whether the zone called the Genesee of that region agreed any more closely with the Genesee of New York, than the beds of northeastern Pennsylvania, which had been referred to that stage. A highway cut, No. 1481 A 1, opposite the bridge across the Lehigh River between Weissport and Lehighton, and just below the Lehighton Station of the Lehhigh Valley Railroad, affords an excellent opportunity to study the so-called Genesee of that region. The exposure consists mainly of bluish to bluish-black, argillaceous shales, which contain fossils in considerable abundance. In lithologic character, the deposit agrees closely with the similar zone further to the northeast; but the fauna is not that of the Genesee shales but of the argillaceous Hamilton shales as will be seen by referring to the list of species; some of the most common forms being *Spirifera mucronata* (Con.) Bill., and *Tropidoleptus carinatus* (Con.) Hall. A short distance up the street and under the blackish shale is a stratum with large numbers of Bryozoa, Crinoidal stems etc., similar to the zone called the "Tully limestone" on the Bushkill creeks. The highway cut, through this argillaceous shale was made in 1890 when the river bridge was built, and is just above the exposure on the Lehigh Valley Railroad which was described by Prof. White as the Genesee.[5]

FAUNA OF NO. 1481 A1.

Spirifera mucronata (Con.) Bill	(aa)
Spirifera fimbriata (Con.) Hall	(rr)
Tropidoleptus carinatus (Con.) Hall	(c)
Chonetes mucronata Hall (?)	(a)
Homalonotus de kayi (Green) Emm	(r)
Phacops rana (Green) Hall	(rr)
Dalmanites (Cryphæus) boothi (Green) Hall	(rr)
Microdon (Cypricardella) bellistriatus (Con.) Hall	(rr)

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[1] Sum. Desc. Geol. Penn., Vol. II, p. 1371.

[2] Ibid., p. 1385.

[3] G^6, pp. 80, 81: On page 109 it is stated that "the thickness of the group [Genesee] seems to remain constant at about 200 feet, from the eastern line of the district clear through to the Lehigh River in Carbon County."

[4] *Ibid.*, *pp.* 80, 81.

[5] *G^6, p. 108.*

Macrodon hamiltoniæ Hall (?)	(rr)
Strophodonta perplana (Con.) Hall (?)	(rr)
Orthis vanuxemi Hall (?)	(rr)
Chonetes coronata (Con.) Hall	(rr)
Rhynchonella sappho Hall (?)	(rr)
Michelina (Pleurodictyum) stylopora (Eaton) Hall (?). The specimens are like Pleurodictyum problematicum Goldf. which is regarded as a Michelina	(rr)
Cf. Striatopora (Thamnoptychia) limbata (Eaton) Hall	(c)

It will be noticed that all these fossils are Hamilton species and there is no more reason for regarding this zone as belonging to the Genesee, than the one further northeast, of which this is the southwestern continuation. Mr. Winslow was correct in regarding the exposures at Lehighton and Weissport as of the same geologic age, with some difference in lithologic character, but the fossils show that the geologic age is Hamilton instead of Genesee.

No. 1481 A2.—Exposures in southern part first railroad cut north of Bowmans Station on the Lehigh Valley Railroad. The shales are of blackish to bluish-black color, quite fossiliferous and somewhat slaty, due to the folding which has also distorted the fossils. *Spirifera mucronata* Hall (?) and *Phacops rana* (Green) Hall are common fossils. This is the outcrop mentioned by Prof. White as "about 30 rods above Bowmans Station,"[1] which was called Genesee, in which correlation he was followed by Winslow and Hill[2] and which is accepted by Prof. Lesley in his final report.[3]

FAUNA NO. 1481 A2.

Spirifera mucronata (Con.) Hall	(aa)
Chonetes coronata (Con.) Hall	(rr)
Chonetes mucronata Hall (?) The specimens are nearly twice the size of the ordinary ones of this species, and on one specimen the spines do not appear to extend parallel to the hinge line.	(a)
Strophodonta perplana (Con.) Hall (?)	(rr)
Cyrtina hamiltonensis Hall	(rr)
Michelina (Pleurodictyum) stylopora (Eaton) Hall	(c)
Dalmanites (Cryphæus) boothi (Green) Hall	(r)
Phacops rana (Green) Hall	(rr)
Homalonotus de kayi (Green) Emm	(rr)
Nucula corbuliformis Hall (?)	(rr)

It will be seen that, like all the other so-called "Genesee" horizons, the fossils show this to be of Hamilton age.

Farther north in the cut is a rather calcareous stratum which contains large numbers of shells, as *Orthis*. This is probably the same horizon as the one generally called the Tully limestone by the Pennsylvania geologists.

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[1] G^6, p. 108.

[2] An. Rep. 1886, Pt. IV, p. 1374, where it is stated that "only 125 feet of these shales [Genesee] are exposed on the north side of the anticlinal fault at Lock No. 14. They are quite like the shales which rise on each side of the anticlinal near Weissport;" and see Winslow's-cross section of this region.

[3] Sum. Desc. Geol. Penn, Vol. II, p. 1327; where is the statement that the Genesee occurs "about 30 rods above Bowman's."

The above description of the Lehigh section shows that there is no more evidence in favor of the correlation of this argillaceous zone of the Hamilton stage with the Genesee stage of New York than was found for the same zone in Pike and Monroe counties and southeastern New York. The fossils are not Genesee but Hamilton species, and, moreover, the lithologic characters are not those of the Genesee shale, but those of the black argillaceous zones of the Hamilton, as, for instance, the Moscow shale immediately below the Tully limestone. After making the long sections along the Delaware, Lackawanna and Western Railroad and Pocono Creek, the Devonian rocks were followed northeasterly through Monroe and Pike counties, Pa., and across the Delaware River into New York. Numerous shorter sections were made along the gorges of the various creeks, across rocks of Middle and Upper Devonian age. The first of these local sections is along Marshall Creek, the nearest creek of any size to the east of Brodhead Creek.

MARSHALLS CREEK SECTION.

No. 1476 A1.—An exposure of blue, moderately arenaceous shale by roadside about one-half mile north of Marshalls Falls post-office, and only a few rods south of the entrance to Marshalls Falls. The fossils are common, mainly Hamilton, with a few Marcellus species, while the most common form is *Leiorhynchus multicosta*, Hall (?). A little farther up the road, about opposite the house, the shales are coarser, with a larger number of species, and these are all Hamilton fossils.

FAUNA OF NO. 1476 A1.

Leiorhynchus multicosta Hall (?)	(aa)
The specimens are all rather small and must be compared with fig. 26, Pl. 56 (Geol. Surv. N. Y., Palæontology, Vol. IV, Pt. I) of the above species, which is stated to be a young shell. There does not seem to be a specific difference between these and the specimens from the Marcellus shale of No. 1475 B1, which are L. limitaris (Van.) Hall.	
Ambocœlia umbonata (Con.) Hall	(a)
Modiella pygmæa (Con.) Hall	(r)
Nuculites oblongatus Con	(rr)
Nucula corbuliformis Hall	(a)
Nuculites triqueter Con	(r)
Palæoneilo constricta (Con.) Hall (?)	(rr)
Specimen badly crushed and distorted.	
Grammysia constricta Hall	(r)
Chonetes scitula Hall (?)	(c)
Chonetes lepida Hall	(r)
Chonetes mucronata Hall	(rr)
Lingula sp., a broken specimen with a strong median impression, cf. L. alveata Hall, but in proportions it is nearer L. delia Hall	(rr)
Orthoceras subulatum Hall (?)	(rr)
Leiopteria lævis Hall	(rr)

Actinopteria muricata Hall (?)	(rr)

This may be a small specimen of A. boydi (Con.) Hall, for it is broken, and according to the descriptions these species have similar markings, but A. boydi is a large species and this specimen is small.

(?) Leiopteria cf. gabbi Hall	(rr)
Loxonema sp	(rr)

No. 1476 A2.—Marshalls Falls, on Marshalls Creek, one-half mile north of Marshalls Falls post-office. The entire exposure is apparently Lower Hamilton. Prof. White says, "The stream has cut a narrow gorge at the base of the Hamilton only 5 to 8 feet wide, through which it falls into a large amphitheater hollowed out of the soft Marcellus beds below."[1] It is true that in the blue shales below the falls fossils are not nearly so abundant as they are farther up the bluff, but those that do occur are Hamilton species. In the amphitheater below the falls *Vitulina pustulosa* Hall occurs in the shales just at the water's edge, and this is a well-known Hamilton species. In the fine shales of the bluff forming the lower portion of the falls the smaller forms of characteristic Hamilton fossils are quite abundant. Above the brink of the falls the rock is more coarsely arenaceous, and in this *Spirifera granulifera* Hall (?) and similar species occur. Prof. White says, "At the head of the falls numerous fossils were observed, among which were *Spirifer granuliferus*, *Grammysia bisulcata*, *Athyris spiriferoides*, besides numerous crinoidal stems."[1]

FAUNA OF NO. 1476 A2—(FROM THE EDGE OF WATER BELOW MARSHALLS FALLS).

Vitulina pustulosa Hall	(rr)
Chonetes mucronata Hall (?)	(rr)

Rather poorly preserved specimens and not safe to identify them positively.

One specimen of a smooth impression which looks as though it might be a fragment of an algoid frond. Similar impressions were seen at several localities in the Hamilton shales of northeastern Pennsylvania.

FAUNA OF NO. 1476 A2.

Vitulina pustulosa Hall	(aa)
Ambocœlia umbonata (Con.) Hall	(rr)
Spirifera mucronata (Con.) Hall	(a)
Spirifera granulifera Hall (?)	(rr)

Possibly S. medialis Hall, but there is a strong furrow in the mesial fold.

Tellinopsis subemarginata (Con.) Hall	(rr)
Phacops rana (Green) Hall	(c)
Dalmanites boothi (Green) Hall (?)	(r)
Chonetes lepida Hall	(rr)
Chonetes deflecta Hall (?)	(c)
Chonetes mucronata Hall (?)	(a)

Part of the above specimens are undoubtedly C. mucronata and thence they grade up to typical C. deflecta. These and specimens from other localities seem to prove Prof. Hall's suspicion that C. deflecta is only a larger form of C. mucronata (Geol. Surv. N. Y. Palæontology, Vol. IV. Pt. I, p. 126).

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[1] G^{6}, p. 255.

Paracyclas lirata (Con.) Hall	(rr)
Nuculites triqueter Con	(rr)
Nucula bellistriata (Con.) Hall (?)	(rr)
Specimen broken, but there is little doubt as to its identification.	
Streptorhynchus chemungensis (Con.) Hall var. arctostriata (?)	(rr)
Strophodonta perplana (Con.) Hall	(rr)
Productella sp. possibly P. truncata Hall. The specimen is broken, but the umbo of the dorsal valve is slightly truncate	(rr)
Hyolithes aclis Hall	(r)
Pholadella radiata (Con.) Hall (?)	(rr)
Lunulicardium fragile Hall	(rr)
Palæoneilo constricta (Con.) Hall	(rr)
Pleurotomaria sulcomarginata Con. (?)	(rr)
An internal impression which closely resembles fig. 16, Pl. XIX of this species (Geol. N. Y. Palæontology, Vol. IV, Pt. I).	
Coleolus tenuicinctum Hall (?)	(rr)
Grammysia sp	(rr)
Bryozoa	(r)

Further up the creek were loose shales in which additional species of fossils were found; also some shales of somewhat different lithologic character containing fragments of fossil plants, which closely resemble *Psilophyton princeps* Dn.

FAUNA OF NO. 1476, A2+ (UP MARSHALLS CREEK ABOVE THE FALLS).

Ambocœlia umbonata (Con.) Hall	(r)
Cimitaria recurva (Con.) Hall	(rr)
Hyolithes aclis Hall	(rr)
Athyris spiriferoides (Eaton) Hall	(rr)
Spirifera mucronata (Con.) Bill	(rr)
Modiomorpha mytiloides (Con.) Hall (?)	(rr)
Two broken specimens which may be M. concentrica (Con.) Hall.	
Coleolus tenuicinctum Hall	(rr)
Psilophyton princeps Dn. (?)	(r)
The specimens are fragmentary in an arenaceous shale and possibly are only fern stipes. It is very difficult to identify such fragmentary remains of fossil plants, and on that account their evidence is of very little value. The custom of the older paleobotanists seems to have been very generally to describe such remains, when from different localities or formations, as new species. In this way the list of so-called species of fossil plants has attained great dimensions, the number of which is being most industriously increased by some students of paleobotany.	

No. 1476 A7.—By the roadside above the Yedder schoolhouse, rather coarse arenaceous shales which correspond to the typical, moderately coarse, arenaceous Hamilton shales of Hamilton, N. Y., and contain plenty of fossils.

FAUNA NO. 1476 A7 (ALONG THE HIGHWAY ABOVE MARSHALLS FALLS).

Palæoneilo constricta (Con.) Hall	(r)
Another specimen, which is broken, is quite elongate and resembles somewhat P. plana Hall.	
Leda diversa Hall	(rr)
Tropidoleptus carinatus (Con.) Hall	(rr)

Nucula corbuliformis Hall	(r)
Microdon (Cypricardella) bellistriatus (Con.) Hall	(rr)
Ambocœlia umbonata (Con.) Hall	(rr)
Atrypa reticularis (Linné) Dalm.	(rr)
Athyris spiriferoides (Eaton) Hall	(rr)
Spirifera granulifera Hall (?)	(c)
Specimens not well preserved and scarcely any indication of the granules.	
Spirifera medialis Hall (?)	(r)
Grammysia bisulcata (Con.) Hall	(rr)
Prothyris planulata Hall	(rr)
Phthonia sectifrons (Con.) Hall	(rr)
Nuculites cuneiformis Con. (?)	(rr)
Pholadella radiata (Con.) Hall	(rr)
Leiopteria bigsbyi Hall (?)	(r)
Actinopteria boydi (Con.) Hall	(rr)
Modiomorpha sp., possibly M subalata (Con.) Hall	(rr)
Homalonotus de kayi (Green) Emm	(rr(
Hyolithes aclis Hall	(rr)
Phacops rana (Green) Hall	(rr)
Dalmanites boothi (Green) Hall	(r)
Chonetes lepida Hall	(rr)
Orthoceras nuntium Hall (?)	(rr)
Orthoceras sp.	(rr)
Rhynchonella sp.	(rr)
Pleurotomaria sp.	(rr)
Cyclonema sp	(rr)
Discina sp.	(rr)
Strophodonta inequistriata (Con.) Hall	(rr)
A rather large specimen, but there are strong striæ, with intermediate finer ones, and it is near fig. 2 f, Pl. XVIII (Geol. N. Y., Palæontology, Vol. IV, Pt. I).	

No. 1476 A6.—High ledges on hill east of Marshalls Creek and southeast of Miller's shop. The outcrop consists of rather coarse arenaceous bluish shales in which fossils are quite common.

FAUNA OF No. 1476 A6.

Leiorhynchus mesacostalis Hall (?)	(c)
Possibly these specimens are L. globuliformis (Van.) Hall and they should be compared with specimens from Kattle Hill, in the Chenango River Valley, Broome County, N. Y.	
Spirifera mesastrialis Hall	(rr)
Spirifera mesacostalis Hall	(rr)
Paracyclas lirata (Con.) Hall	(rr)
Tropidoleptus carinatus (Con.)	(r)
Chonetes lepida Hall	(c)
Chonetes setigera Hall	(r)
Orthis impressa Hall (?)	(rr)
Actinopteria cf. zeta Hall	(rr)
Actinopteria sp	(rr)
(?) Cladochonus sp	(r)

Prof. White, in describing the Chemung beds of Middle Smithfield Township, states that they are uncovered "in the vicinity of Miller's sawmill, where the creek makes a fall of 8 feet over them, and great cliffs of the same are seen near the crest of the hill just below."[1] The exposure mentioned as "the crest of the hill" is evidently station 1476 A6; but it is an outcrop of moderately coarse arenaceous Hamilton shale, rather than of the so-called Chemung.

No. 1476 A5.—Ledges by the side of Marshalls Creek at H. Miller's house and shop, also a ledge forming a fall in the creek. Bluish arenaceous shale containing some fossils.

FAUNA OF NO. 1476 A5.

Leiorhynchus mesacostalis Hall	(c)
Some of the specimens show from two to four less prominent plications on each side of the mesial fold and sinus.	
Spirifera mesastrialis Hall	(r)
Spirifera mesacostalis Hall (?)	(c)
Some of the specimens resemble quite closely S. mucronata (Con.) Bill. and should be compared with the variety of this species from Chenango, N. Y., figured by Prof. H. S. Williams (Bull. Geol. Soc. Am., Vol. I, Pl. XII, fig. 13.	
Palæoneilo constricta (Con.) Hall	(rr)
Paracyclas lirata (Con.) Hall	(r)
(?) Palæoneilo tenuistriata Hall	(r)
Shell badly broken and identification doubtful.	
Chonetes sp	(rr)
Phacops rana (Green) Hall	(rr)

This is the locality mentioned by Prof. White as "the fall of 8 feet" which was cited above.

No. 1476 A4.—Ledges of bluish, arenaceous shale by roadside only a short distance south of Dead Mans Run, where the road forks not far above Miller's shop. The shales split up into thin layers and fossils are quite common.

FAUNA OF NO. 1476 A4.

Paracyclas lirata (Con.) Hall	(c)
Tropidoleptus carinatus (Con.) Hall	(rr)
Spirifera mesacostalis Hall	(rr)
Spirifera sp., probably S. mesastrialis Hall, but the specimens show scarcely any indications of fine striæ on the large plications	(a)
Leiorhynchus mesacostalis Hall	(rr)
Atrypa reticularis (Linné) Dalm	(rr)
Chonetes setigera Hall	(c)
Rhynchonella cf. stephani Hall	(rr)
Palæoneilo constricta (Con.) Hall	(rr)
Modiomorpha subalata (Con.) Hall var. chemungensis Hall (?)	(c)
Two of the specimens are larger than those figured by Prof. Hall, yet they seem to have the proportions of the variety rather than those of the species.	
Palæoneilo emarginata (Con.) Hall (?)	(rr)
Actinopteria boydi (Con.) Hall	(c)
Grammysia sp	(rr)
Leptodesma sp	(rr)
Pleurotomaria sp	(rr)

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[1] G^6, p. 230.

No. 1476 A3.—At this point the lowest reds cross the road and run, and the ledge shows distinctly for some distance to the west. The red shale, which according to Prof. White is the New Milford red shale, has a thickness of about 56 feet as exposed in the road.[1]

A short distance farther north, on the western side of the road, is a ledge of bluish-gray sandstone, which has been worked to some extent for flagging stone. This is the J. Chamber's quarry, which is about 4 miles up Marshalls Creek from the post-office, and which was described by Prof. White and referred to the horizon of the Delaware flags.[1]

The sandstone is dipping 27° to the north, 20° to 25° west. No fossils were found except some fragments of plant stems.

SECTIONS OF THE BUSHKILL CREEKS.

No. 1476 C1.—Exposures in Saw Creek or Middle Bushkill, at Winona Falls. Most of the rock is a bluish arenaceous shale in which fossils are rare; but by the turn in the path opposite the third cascade, counting from the upper one down the stream, is a thin breccia-like layer in which fossils are abundant, and a few may be found in the blue, rather argillaceous shales inclosing the fossiliferous layer. The rocks about the Winona cascades are in Prof. White's Chemung.

FAUNA OF No. 1476 C1.

Leiorhynchus mesacostalis Hall	(rr)
Rhynchonella cf. stephani Hall	(rr)
Chonetes lepida Hall	(r)
Chonetes scitula Hall (?)	(rr)
Actinopteria boydi (Con.) Hall	(c)
Nucula corbuliformis Hall	(rr)
Tentaculites cf. bellulus Hall	(rr)
Pleurotomaria sp	(rr)
(?) Modiomorpha sp	(rr)
Crinoid stems.	
Spirifera sp	(a)

Large specimens, with coarse, angular ribs, deep sinus, broad fold, no pustules, and scarcely any indication of fine secondary striæ. Owing to the imperfect preservation of the finer surface markings it is difficult to identify these specimens specifically.

No. 1476 C2.—Along the bluffs of Saw Creek, from the first falls below Winona to the second, are bluish, argillaceous shales in which some fossils occur. At places are layers containing large numbers of *Leiorhynchus multicosta* Hall.

FAUNA OF No. 1476 C2.

Chonetes scitula Hall	(rr)
Spirifera mucronata (Con.) Bill	(r)
Leiorhynchus multicosta Hall	(c)

Some of the specimens approach L. mesacostalis Hall in absence of plications and form.

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[1] G^6, p. 231.

Tropidoleptus carinatus (Con.) Hall	(rr)
Pholadella radiata (Con.) Hall	(rr)
Microdon sp	(rr)
Surface markings, so far as preserved, near M. gregarius Hall; but the proportions of the shell are nearer M. bellistriatus (Con.) Hall.	
(?) Leptodesma sp	(rr)
Crinoid, stem, calyx, and arms, but poorly preserved	(rr)

No. 1476 C3.—Lower falls in Saw Creek over sandstones. This was called the base of the Genesee by Prof. White. In places it is quite calcareous and contains numerous fossils, *Orthis vanuxemi* Hall and others.

FAUNA OF NO. 1476 C3.

Orthis vanuxemi Hall	(c)
Phacops rana (Green) Hall	(rr)
Spirifera mucronata (Con.) Bill	(r)
Spirifera fimbriata (Con.) Hall	(rr)
Strophodonta inequistriata (Con.) Hall	(a)
Strophodonta perplana (Con.) Hall (?)	(rr)
Chonetes coronata (Con.) Hall (?)	(rr)
Athyris spiriferoides (Eaton) Hall	(rr)
Prothyris lanceolata Hall	(rr)
Bellerophon leda Hall (?)	(rr)
Small specimen, but with the markings of this species.	
(?) Stictopora sp	(rr)

Prof. White presents a section of these falls under the heading of the "Middle Bushkill Falls section,"[1] and gives 50 feet of Genesee slate, then 15 feet of dark, hard sandstone, which forms the falls and which is stated to be "the lowermost portion of the Genesee."

No. 1476 C4.—Just under the falls is a stratum of rock which is largely composed of corals and *Syringopora*, and which reminds one somewhat of the crinoidal limestone of the New York Hamilton. The stratum comes up to the base of the sandstone above, and then stops, being exposed only on the eastern bank below the falls. This layer forms No. 3 of Prof. White's section,[1] and he states that it "marks the dividing line between the Genesee and the Hamilton proper. The whole 30 feet is one mass of corals, penetrating in every direction the dark bluish matrix. Many of the corals have been dissolved and leave the surface of the inclosing rock honeycombed and pitted in every manner conceivable. The species are very numerous and the individuals simply countless. This stratum doubtless marks the horizon of the Tully limestone of New York."

In the chapter on the "Description of the geological formations," under the heading of the "Tully limestone horizon," this locality is mentioned and the statement made that "probably the best exposure is at the falls of Middle Bushkill, 1½ miles above its junction with the Big Bushkill. Here it is a perfect mass of corals and shells for about 30 feet, a great number of species and genera being represented, among which the following were recognized: *Zaphrentis Rafinesquii*, *Z gigantea*, *Heliophyllum Halli*, together with several species of *Syringopora*, and other forms that I could not determine. This is by far the richest coral horizon in the district, being, in fact, a regular fossil reef. The calcareous portions of the coral stems have often been removed by solution, and then the matrix (usually a dark-gray calcareous shale) is penetrated by small branching cavities extending in every direction, thus giving it a honeycombed appearance."[1]

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[1] G^6, p. 213.

FAUNA OF NO. 1476 C4.

Favosites hamiltoniæ Hall	(c)
Ambocœlia umbonata (Con.) Hall	(rr)
Spirifera mucronata (Con.) Bill	(rr)
Spirifera fimbriata (Con.) Hall	(rr)
Cypricardinia indenta (Con.) Hall	(rr)
Cyathophylloid corals, at least three species are abundant, permeating the rock in nearly every direction	(a)

No. 1476 C5.—This exposure is by the side of the new road on the northern side of the Big Bushkill, which extends westerly from Bushkill and intersects the north and south road which crosses the Big Bushkill and Saw Creeks. There are fissile grayish to dark blue shales in the cuts along this road, especially at the foot of the steep hill not far east of its junction with the north and south road; also at the eastern end, where the road turns down from the hill before crossing the Little Bushkill. All of them contain some fossils, *Leiorhynchus limitaris* (Van.) Hall being the most abundant. These shales are pretty clearly of Marcellus age.

FAUNA OF NO. 1476 C5.

Leiorhynchus limitaris (Van.) Hall	(aa)
Lunulicardium fragile Hall	(rr)

FAUNA OF NO. 1476 C5+(GRAYISH SHALES A LITTLE NORTHWEST OF THE BLUISH SHALES.

Leiorhynchus limitaris (Van.) Hall	(c)
Actinopteria muricata Hall	(rr)
Goniatites sp	(rr)

No. 1476 B1.—Bluish sandstones and shales in highway and by the side of Little Bushkill, where the highway crosses the creek above the falls, 3 miles north of Bushkill. The dip is from 14° to 16° to the north about 20° west. No fossils were found. Some of the ledges are rather grayish, split into thin layers, and somewhat resemble portions of the Starucca sandstone series. However, it is probably somewhat lower and in the so-called Chemung, as colored on the geological map of Pike and Monroe counties.

No. 1476 B2.—Upper portion of the blue arenaceous shales at Bushkill Falls, in the Little Bushkill Creek. Fossils are not very abundant in these shales.

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[1] G^4., p. 109.

Fauna of No. 1476 B2.

Spirifera mucronata (Con.) Bill	(r)
Tropidoleptus carinatus (Con.) Hall	(r)
Nucula lirata (Con.) Hall (?)	(rr)
A small and imperfect specimen which agrees most closely with the above species.	
Spirifera fimbriata (Con.) Hall	(rr)
Nucleospira concinna Hall	(rr)
Ambocœlia umbonata (Con.) Hall (?)	
Microdon (Cypricardella) bellistriatus (Con.) Hall	(r)
Orthis vanuxemi Hall (?) or Orthis leucosia Hall (?)	(r)
Phacops rana (Green) Hall	(rr)
Cypricardinia indenta (Con.) Hall	(rr)
Actinopteria decussata Hall (?)	(rr)
Palæoneilo constricta (Con.) Hall	(rr)
(?) Bellerophon sp	(rr)

The rocks along the channel of the creek above these falls are called Genesee shales by Prof. White; but at the brink of the falls the professor states that the creek has cut down to the Hamilton sandstone, when it descends 75 feet vertically, and then passing out through a narrow channel descends another 50 feet.[1]

No. 1476 B3.—From the ledges along the side of the path below the lower falls. Here the shales are more argillaceous than those along the path by the upper falls, and fossils are more common.

Fauna of No. 1426 B3.

Atrypa reticularis (Linné) Dalm	(rr)
Phacops rana (Green) Hall	(r)
Dalmanites (Cryphæus) boothi (Green) Hall	(rr)
Chonetes lepida Hall	(rr)
Chonetes mucronata Hall	(rr)
Ambocœlia umbonata (Con.) Hall	(rr)
Nucleospira concinna Hall (?)	(rr)
Nuculites oblongatus (Con.) Hall	(rr)
Palæoneilo constricta (Con.) Hall	(rr)
Palæoneilo muta Hall	(rr)
Nucula lirata (Con.) Hall	(rr)
Tellinopsis subemarginata (Con.) Hall	(rr)
Spirifera mucronata (Con.) Bill (?)	(rr)
Pleurotomaria sp	(rr)
Orthoceras sp	(rr)

No. 1476 B4.—A prominent ledge of rocks south of the road, 1½ miles up the falls road from Bushkill, and opposite sign board "one-half mile to Bushkill Falls." The rocks are moderately coarse arenaceous shales. Fossils are not very common, trilobites being the most abundant. It seems rather remarkable that Prof. White, when describing the Hamilton sandstones, should state: "Not a single specimen of a trilobite was observed in all this thickness of rock, at the many localities where it is exposed for observation within the district;"[1] and the statement is repeated by Prof. Lesley in the final report.[2]

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[1] G^4, p. 212.

It will be seen from the lists of identified fossils reported in this paper, that trilobites are not of uncommon occurrence, but on the contrary appear to be about as abundant as in the Hamilton rocks of central and western New York.

FAUNA OF NO. 1476 B4.

Phacops rana (Green) Hall	(aa)
Palæoneilo constricta (Con.) Hall	(r)
Tellinopsis subemarginata (Con.) Hall	(rr)
Pleurotomaria capillaria Con	(rr)
Orthoceras sp	(r)

No. 1476 B5.—Bluish arenaceous shales near the summit of Prickly Pear Hill, west of Bushkill. Only a few specimens of *Nucula corbuliformis* Hall were found.

No. 1476 B6.—At the foot of the hill, which is 350 feet lower than B5, a small exposure of bluish-black shale was found in which *Lunulicardium fragile* Hall occurs, but the exposure is not so good as that along the highway at the foot of the hill farther west.

SECTIONS NEAR DINGMANS, PIKE COUNTY, PA.

No. 1476 E1.—Exposures in Hornbecks Creek, at the foot of Indian Ladder Falls, 2½ miles south of Dingmans. The rocks are the blue arenaceous moderately coarse shales of the Hamilton. Fossils are not common. In the bed of the creek are loose blocks of a coarse-grained, somewhat calcareous rock in which fossils are abundant. They are washed down from above and are probably from the calcareous horizon called Tully by Prof. White. Higher up the cliff the fossils are rather more abundant.

FAUNA OF NO. 1476 E1.

Spirifera granulifera Hall	(r)
Tropidoleptus carinatus (Con.) Hall	(rr)
Platyceras sp	(rr)
Athyris spiriferoides (Eaton) Hall	(rr)
Spirifera medialis Hall (?)	(r)
Modiomorpha concentrica (Con.) Hall	(rr)
Goniophora hamiltonensis (Hall) Mill	(rr)
Palæoneilo constricta (Con.) Hall	(r)
Nuculites oblongatus Con. (?)	(rr)
Homalonotus de kayi (Green) Emm	(rr)
Paracyclas lirata (Con.) Hall	(rr)
Coleolus tenuicinctum Hall	(rr)
(?) Murchisonia sp	(rr)

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[1] G⁶, p. 112.

[2] A Summary Desc. of the Geol. of Penn., Vol. II, 1892, p. 1249.

FAUNA OF NO. 1476 E (FROM LOOSE BLOCKS IN HORNBECK CREEK, BELOW INDIAN LADDER FALLS).

Strophomena perplana (Con.) Hall	(rr)
Chonetes coronata (Con.) Hall (?)	(rr)
Tropidoleptus carinatus (Con.) Hall	(rr)
Rhynchonella cf. prolifica Hall	(rr)
Spirifera sp., cf. S. medialis Hall and S. granulifera Hall	(c)

No. 1476 E2.—Farther up the creek, above all the high cascades and where only small ones exist, are blue, somewhat argillaceous shales of irregular cleavage, similar to the finely arenaceous shales of New York, in which fossils are common.

FAUNA OF NO. 1476 E2.

Palæoneilo constricta (Con.) Hall	(a)
Cypricardinia indenta (Con.) Hall	(rr)
Macrodon hamiltoniæ Hall	(rr)
Tellinopsis subemarginata (Con.) Hall	(r)
Orthonota undulata Con	(rr)
Modiomorpha mytiloides (Con.) Hall	(rr)
Nucula corbuliformis Hall	(rr)
Grammysia constricta Hall	(rr)
Spirifera mucronata (Con.) Bill	(rr)
Ambocœlia umbonata (Con.) Hall	(rr)
Phacops rana (Green) Hall	(rr)
Hyolithes aclis Hall	(rr)

No. 1476 H1.—Dingmans, Delaware Township, Pike County, Pa. First rapids in Dingmans Creek, just above the first house and an old mill after turning up the High Falls road, one-half mile from Dingmans. The rock is a bluish, somewhat argillaceous shale, which closely resembles the New York undisturbed layers of similar shale. The dip is not great and the cleavage planes, which in this region generally split the rocks at nearly right angles to the bedding and fossils, are not marked. *Leiorhynchus multicosta* Hall is the most common fossil, but there are species of the smaller lamellibranchs which correlate the exposure with the Hamilton.

FAUNA OF NO. 1476 H1.

Leiorhynchus multicosta Hall	(a)
Nuculites triqueter Con	(rr)
Prothyris sp. (?)	(rr)
Differs from any of the species figured by Prof. Hall.	
Modiella pygmæa (Con.) Hall	(rr)
Nucula lirata (Con.) Hall	(rr)
Actinopteria subdecussata Hall (?)	(rr)
Goniatites sp	(rr)

No. 1476 H2.—The Silver Thread Falls, in a branch that enters Dingmans Creek from the east, have cut down through the thin Hamilton shales along the lines of joints. The line of jointing is 20° north of east and the dip is not great. *Paracyclas lirata* (Con.) Hall and *Rhynchonella* sp. were found at this locality.

No. 1476 H3.—Cliffs along the side and at the top of Deer Leap Falls, of bluish, arenaceous shales, in places approaching a sandstone. Fossils are rather sparingly distributed through the shales, but in certain layers are numerous aviculoid Lamellibranch shells, especially in a layer at the top of the falls. The rock as it splits up is of irregular surface on the under side and above this surface are numerous shells which have the appearance of being somewhat worn, as though they had possibly been washed along the beach for some time. Some of the specimens are in the center of the layers of rock, but more are on the under side, as just described. This locality is mentioned by Prof. White, who says: "Just above [one-fourth mile] the crossing of the old State road is the Deer Lick Falls, where the stream takes a plunge of 40 feet over a cliff of Chemung sandstone whose top is 750 feet A. T."[1]

FAUNA OF No. 1476 H3.

Paracyclas lirata (Con.) Hall	(rr)
Leda diversa Hall	(rr)
Palæoneilo emarginata (Con.) Hall, variety (?), specimen poorly preserved and identification doubtful	(rr)
Actinopteria boydi (Con.) Hall	(c)
Actinopteria, cf. epsilon Hall	(r)
Palæoneilo plana Hall or P. maxima (Con.) Hall	(rr)
Specimen broken so that it is difficult to decide to which of the above species it belongs.	
Modiomorpha subalata (Con.) Hall, var. chemungensis Hall (?)	(rr)
Grammysia sp	(rr)

No. 1476 H4.—The cliffs of Fulmer Falls are composed of blue, moderately arenaceous shales, which split up into rather thin layers, in some of which fossils are abundant, a large number of specimens of a few species, principally Lamellibranchs, having been secured.

FAUNA OF No. 1476 H4.

Paracyclas lirata (Con.) Hall	(aa)
Tropidoleptus carinatus (Con.) Hall	(c)
Leiorhynchus mesacostalis Hall	(aa)
Chonetes lepida Hall	(r)
Chonetes scitula Hall	(r)
Chonetes setigera Hall	(c)
Spirifera mesacostalis Hall	(rr)
Spirifera mesastrialis Hall	(rr)
Microdon (Cypricardella) bellistriatus (Con.) Hall	(rr)
Microdon (Cypricardella) gregarius Hall	(a)
Nucula corbuliformis Hall	(rr)
Hyolithes aclis Hall (?)	(rr)
Palæoneilo filosa (Con.) Hall	(rr)
Leda diversa Hall	(rr)
Nuculites cuneiformis Con	(rr)
Palæoneilo cf. plana Hall	(rr)
But the specimens are larger than those of this species and possibly they are P. maxima (Con.) Hall, although the proportions are not those of typical specimens of this species.	

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[1] G^4, p. 207.

Modiomorpha subalata (Con.) Hall var. chemungensis Hall (?)	(c)
The specimens are not typical of the above species, but part of them are considerably shorter and resemble the M. quadrula Hall.	
Palæoneilo emarginata (Con.) Hall	(rr)
Goniophora cf. carinata (Con.) Hall	(rr)
Palæoneilo filosa (Con.) Hall	(rr)
Actinopteria boydi (Con.) Hall	(c)

No. 1476 H5. At about the middle of the upper cascade (Factory Falls) above the old woolen mill, is an irregular, concretionary layer, similar to those seen in Otsego County, N. Y. These concretions lie on the surface near the mill. Above the lower (Fulmer) falls is quite a thick sandstone, which is exposed on the surface in blocks and forms that falls. Prof. White described these falls and the formations as follows: "Just below Fulmerville, the Fulmer Falls of Dingmans Creek occur near the old woolen mill. The stream descends in a cataract from 890 feet A. T. to 850 feet, and then leaps from a narrow platform of sandstone through dark shaly rocks perpendicularly to 800 feet A. T.

"Chemung fossils occur in the dark shales, but none are seen in the more massive bluish-gray sand rocks above; so that this is near the limit of the Chemung; for on above the upper falls 50 feet there is seen the base of a massive grayish-green current-bedded sandstone which is in the Catskill."[1]

FAUNA OF NO. 1476 H5.

Paracyclas lirata (Con.) Hall	(rr)
Modiomorpha mytiloides (Con.) Hall	(rr)
Nucula corbuliformis Hall (?)	(rr)
Prothyris lanceolata Hall	(rr)
Phthonia sectifrons (Con.) Hall	(rr)
Spirifera mesastrialis Hall	(rr)
Chonetes scitula Hall (?)	(rr)
Loxonema hamiltoniæ Hall (?)	(rr)

No. 1476 H6.—Opposite the old woolen mill in a block of the compact arenaceous shale which has fallen down from the stratum just below the crest of the upper falls, are some fossils, as *Paracyclas lirata* (Con.) Hall, and other species. This stratum is immediately above the concretionary stratum, 1476 H5.

No. 1476 H7.—South of the creek and above the old village is a ledge of grayish coarse-grained sandstone, which at that time was referred to the Catskill[2] by Prof. White, who says: "On above the upper falls 50 feet there is seen the base of a massive grayish-green current-bedded sandstone, which is in the Catskill; it makes a cliff along the hills."[1]

No. 1476 D1.—Exposures of shale along Adams Creek, north of Dingmans and below Mr. Mulford's house. Blue argillaceous shale, in which fossils are common at intervals.

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[1] G^6, p. 207.

[2] Prof. White would now correlate this sandstone with the upper Chemung, as was stated on page 12 in reference to the same formation near Spragueville, Monroe County.

FAUNA OF NO. 1476 D1.

Modiomorpha mytiloides (Con.) Hall	(rr)
(?) Glossites cf. subtenuis Hall	(rr)
Nuculites triqueter (Con.) Hall	(rr)
Tellinopsis subemarginata (Con.) Hall	(rr)
Paracyclas lirata (Con.) Hall	(r)
Orthis vanuxemi Hall	(rr)
Rhynchonella cf. congregata (Con.) Hall	(r)
Chonetes setigera Hall	(rr)
Tropidoleptus carinatus (Con.) Hall One specimen is a young shell.	(rr)
Coleolus tenuicinctum Hall	(rr)
Macrodon hamiltoniæ Hall (?)	(rr)
Nucula corbuliformis Hall	(rr)
Modiomorpha cf. small specimens of M. alta (Con.) Hall, possibly young shells of M. mytiloides (Con.) Hall	(rr)
Orthoceras crotalum Hall	(rr)
Actinopteria boydi (Con.) Hall	(c)
(?) Grammysia sp., possibly young of G. constricta Hall	(rr)
Pleurotomaria sp.	(rr)

SECTIONS NEAR MILFORD, PIKE COUNTY, PA.

In the bed of Raymondskill Creek, 3 miles southwest of Milford, above the "Bridal Veil Falls" and below the High Falls, are coarse arenaceous Hamilton shales, some layers of which approach thin sandstones. The rocks have a dip of 16°, 20°, to 25° west of north and a cleavage of 45° to 50° to the southeast. The coral bed, "Tully limestone horizon," is stated to occur at the head of Raymondskill Falls,[1] but it seems to me that it must be farther up the creek, for the coarse, arenaceous shales and thin sandstones continue up the creek some distance above the falls, and in other localities the "coral bed" is near their top. The steep walls of the canyon and the high water did not permit a sufficiently careful examination to determine this point.

After crossing the bridge one-fourth of a mile above the "High Falls," at the summit of the first rise is an exposure of more argillaceous shales, resembling the Genesee shale of Prof. White. The dip is 16°+ about 25° west of north.

At the next small rise in the road, going west, No. 1476 G3, is an outcrop of rather coarse arenaceous shale in which was a beautiful specimen of *Spirophyton velum* (Van.) Hall. This locality is near the Lareaux house and old brewery, and not far east of the Lareaux schoolhouse mentioned by Prof. White.[2]

No. 1476 G1.—On the Chucktown road, about 3 miles from the Delaware River and just west of the house of Mrs. D. M. Case, is a rather prominent ledge of greenish gray coarse-grained sandstone. This is stated by Prof. White to be "the base of the Catskill" (probably

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[1] G^6, p. 109.

[2] G^6, p. 202.

Starucca sandstone, which was later called Upper Chemung), "and a few feet below it the bluish-gray fossiliferous shales and sandstones of the Chemung make their appearance."[1]

No. 1476 G2.—The bluish, arenaceous shales below the coarse sandstone contain a moderate fauna, and specimens were collected from small ledges on the low hill north of Mrs. Case's, as well as from a similar hill on the opposite side of the road, southeast of the house. No considerable number of fossils were obtained, but several specimens of a few species such as were usually seen just before the driving out of the fauna by the invasion of the gray sandstones and later red shale. A few good specimens were obtained from some riprap in the road, the exact locality of which was not learned, except that they came from one of the fields in that vicinity.

FAUNA OF NO. 1476 G2.

Orthonota (?) parvula Hall	(aa)
Many of the specimens are quite small, as well as those of other species, showing that the conditions were becoming unfavorable for marine life. This species is very abundant on one slab from this locality.	
Nuculites oblongatus Con	(c)
Palæoneilo emarginata (Con.) Hall	(rr)
Nuculites cuneiformis Con	(c)
Nucula corbuliformis Hall	(aa)
Modiomorpha subalata (Con.) Hall var. chemungensis Hall (?)	(rr)
Actinopteria boydi (Con.) Hall	(r)
Leptodesma rogersi Hall or L. sociale Hall	(rr)
Specimen broken and these two species are apparently closely related.	
Rhynchonella sp	(rr)
Specimen broken, but apparently of the R. eximia Hall type.	
Spirifera sp	(rr)

SECTION OF THE SAWKILL CREEK, BETWEEN MILFORD AND DINGMAN TOWNSHIPS, NEAR MILFORD.

No. 1476 F1.—Bridal Veil Cascades in Sawkill Creek below the rustic bridge. The exposures consist of bluish, argillaceous, and coarse arenaceous shales, running into thin sandstones, in which specimens of *Tropidoleptus carinatus* (Con.) Hall are abundant. The dip at the foot of the Bridal Veil, and also on the creek below the bridge, is about 14°.

FAUNA OF NO. 1476 F1.

Tropidoleptus carinatus (Con.) Hall	(a)
Palæoneilo emarginata (Con.) Hall (?)	(rr)
Nuculites triqueter-Con	(rr)
Phacops rana (Green) Hall	(rr)

No. 1476 F2.—Above the Sawkill Falls and at nearly the last bed rock in the creek are bluish, rather coarse argillaceous shales, which contain many small Lamellibranchs of the Hamilton fauna. On the western side of the creek is a slight excavation, evidently the beginning of a quarry, in which some bluish sandstone appears, with bluish shales below. The locality is about one-fourth of a mile below the pike bridge, and the sandstone is probably in Prof. White's Chemung, while the shales are from the top of his Genesee. The sandstone is similar to the blue flags of the Hudson River region above Kingston, though not so well developed.

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[1] G^4, p. 204. In reference to the correlation of the Starucca sandstone see Prosser in Am. Jour. Sci., 3d ser., Vol. XLIV, pp. 218, 219.

FAUNA OF NO. 1476 F2.

Tellinopsis subemarginata (Con.) Hall	(a)
Very good and characteristic specimens of this species.	
Nuculites oblongatus (Con.)	(r)
Palæoneilo constricta (Con.) Hall	(o)
Some of the specimens have identically the same form as those from the Cayuga Lake region of New York, so there is not the least doubt in reference to the specific identification.	
Palæoneilo muta Hall	(rr)
Nuculites triqueter Con	(c)
Leda diversa Hall	(rr)
Leda rostellata (Con.) Hall	(rr)
Orthonota carinata Con	(rr)
Prothyris lanceolata Hall.	(rr)
Prothyris planulata Hall (?)	(rr)
Pholadella radiata (Con.) Hall	(rr)
Nucula corbuliformis Hall	(a)
Probably the most abundant species of this fauna, and good typical specimens of the species.	
Goniophora carinata (Con.) Hall (?)	(rr)
Modiella pygmæa (Con.) Hall	(rr)
Modiomorpha mytiloides (Con.) Hall	(c)
Grammysia lirata Hall (?),	(r)
Orthonota (?) parvula Hall.	(rr)
Phacops rana (Green) Hall	(c)
Spirifera fimbriata (Con.) Hall	(r)
Athyris spiriferoides (Eaton) Hall	(rr)
Spirifera granulifera Hall (?)	(rr)
Part of a large shell showing granules on the large plications.	
Tropidoleptus carinatus (Con.) Hall	(rr)
Ambocœlia umbonata (Con.) Hall	(rr)
Chonetes mucronata Hall	(c)
Hyolithes aclis Hall	(c)
Coleolus tenuicinctum Hall	(rr)
Loxonema delphicola Hall (?)	(rr)
Pleurotomaria itys Hall (?)	(c)
In the imperfect condition of these specimens it is difficult to distinguish between the above species and P. capillaria Con., but the number and character of the revolving striæ agree more nearly with P. itys Hall.	
Bellerophon leda Hall	(rr)
Dalmanites (Cryphæus) boothi (Green) Hall, possibly the variety calliteles Green	(rr)
Cyclonema hamiltoniæ Hall (?)	(rr)
Bellerophon brevilineatus Con. (?)	(rr)
(?) Sphenotus cf. cuneatus (Con.) Hall	(rr)
(?) Leiopteria or Leptodesma, not well enough preserved in order to decide which genus.	
Orthoceras sp	(r)
Crinoid stems, small.	
Spirophyton sp.	
Fragments of fossil plants.	

The outcrop from which the above list of fossils was obtained is one of the typical exposures of the zone which was referred by Prof. White to the Genesée shale. The upper part of this gorge of the Sawkill which "rapidly excavates a long narrow cañyon out of the Genesee shale,"[1] is one of the best localities in the zone for collecting fossils. A table showing the geologic range of most of the species in the above list has been prepared, and this shows that only one species of the above list, *Ambocœlia umbonata* (Con.) Hall, has been reported from the Genesee shale of New York, while, with one exception, every species is credited to the Hamilton.

Fauna of No. 1476 F 2, with table of geologic range.

Number of species.	List of species.	Abundance.	Geologic stage.*									
			Oriskany.	Schoharie grit.	Upper Helderberg.	Marcellus shale.	Hamilton.	Tully limestone.	Genesee shale.	Portage.	Ithaca.	Chemung.
1	Nucula corbuliformis Hall	a					×				×	
2	Tellinopsis subemarginata (Con.) Hall	a					×					
3	Palæoneilo constricta (Con.) Hall	c					×			×	×	
4	Nuculites triqueter Con	c				×	×					
5	Modiomorpha mytiloides (Con.) Hall	c					×					
6	Phacops rana (Green) Hall	c			×	×	×	×				×
7	Chonetes mucronata Hall	c			×	×	×					
8	Hyolithes aclis Hall	c					×			×		
9	Pleurotomaria itys Hall	c					×					
10	Nuculites oblongatus Con	r					×			×		
11	Spirifera fimbriata (Con.) Bill	r	×	×	×		×	×			×	×
12	Palæoneilo muta Hall	rr					×					
13	Leda diversa Hall	rr					×					
14	Leda rostellata (Con.) Hall	rr					×			×		
15	Orthonota carinata Con	rr					×					
16	Prothyris lanceolata Hall	rr					×			×		
17	Pholadella radiata (Con.) Hall	rr					×				×	
18	Goniophora carinata (Con.) Hall (?)	rr										
19	Modiella pygmæa (Con.) Hall	rr					×					
20	Orthonota (?) parvula Hall	rr					×					
21	Athyris spiriferoides (Eaton) Hall	rr			×		×					
22	Tropidoleptus carinatus (Con.) Hall	rr					×			×		
23	Ambocœlia umbonata (Con.) Hall	rr				×	×	×	×		×	×
24	Coleolus tenuicinctum Hall	rr					×					
25	Loxonema delphicola Hall (?)	rr					×					
26	Bellerophon leda Hall	rr					×					
27	Dalmanites (Cryphæus) boothi (Green) Hall; possibly the var. calliteles Green	rr			×	×	×	×				
28	Orthoceras sp. fragments	rr										
29	Spirifera granulifera Hall (?)	rr					×					
30	Grammysia lirata Hall (?)	rr					×					
31	Cyclonema hamiltoniæ Hall (?)	rr					×					
32	Bellerophon brevilineatus Con. (?)	rr					×					

* The data used in showing the geologic range of the species in the above list are derived principally from the various works of Professors Hall, H. S. Williams, and Clarke, and the distribution is confined mainly to New York. The reported occurrence of certain species further south along the line of the Appalachians is intentionally left out of consideration, until further investigation shall enable us to compare their stratigraphic position and faunas more carefully with the New York series. Consequently the range of each species is based upon references concerning the reliability of which there is believed to be no question, or upon data that are personally known to be accurate. This is a principle that is frequently ignored in the preparation of large tables of distribution and range of species.

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[1] Prof. White, G^6, p. 109.

No. 1476 F3.—Cliff of bluish argillaceous shale on east bank of creek above the Sawkill Falls. The shales split up into thin pieces are fine-grained and like those of the characteristic Hamilton. The fossils are common, mostly small Lamellibranchs, and in the horizon of Prof. White's Genesee shale.

Fauna of No. 1476 F3.

Palæoneilo constricta (Con.) Hall	(rr)
Modiella pygmæa (Con.) Hall	(rr)
Nuculites oblongatus Con	(rr)
Tellinopsis subemarginata (Con.) Hall	(c)
Nucula lirata (Con.) Hall (?)	(rr)
A small and probably young shell.	
Grammysia sp	(rr)
Ambocœlia umbonata (Con.) Hall	(r)
(?) Psilophyton princeps Dn	(rr)
Spirifera mucronata (Con.) Bill	(rr)
Chonetes mucronata Hall	(rr)
Chonetes setigera Hall	(rr)
Loxonema hamiltoniæ Hall (?)	(rr)
Dalmanites (Cryphæus) boothi (Green) Hall	(rr)
Pleurotomaria sp	(rr)
Cf. Eugaster logani Hall	(rr)

No. 1476 F4.—Exposures in the creek, under the cliff of F3, and above the cascade which is a little higher than the brink of Sawkill Falls. These shales are rather coarser and somewhat more arenaceous than those a little higher up the bluff, but fossils are still common.

Along the eastern side of the canyon, 15 to 20 feet and higher above the cascade, at the top of the Sawkill Falls, are mainly argillaceous shales in association with some that are slightly arenaceous. Fossils are common, especially small Lamellibranchs, near the base of the "Genesee shale" zone.

Fauna of No. 1476 F4.

Palæoneilo constricta (Con) Hall	(a)
Palæoneilo plana Hall (?)	(rr)
Palæoneilo muta Hall	(rr)
Nuculites oblongatus Con	(rr)
Tellinopsis submarginata (Con.) Hall	(rr)
Chonetes coronata (Con.) Hall	(c)
Ambocœlia umbonata (Con.) Hall	(a)
Spirifera mucronata (Con.) Bill	(rr)
Macrodon hamiltoniæ Hall	(rr)
Modiella pygmæa (Con.) Hall	(rr)
Nucula corbuliformis Hall	(rr)
Nucula bellistriata (Con.) Hall	(rr)
Microdon (Cypricardella) bellistriatus (Con.) Hall	(rr)
Modiomorpha concentrica (Con.) Hall	(rr)
Two of the specimens are young shells like fig. 2, Pl. XXXV, (Geol. Surv. N. Y., Palæontology, Vol. V, Pt. I, Lamellibranchiata II.)	
Orthonota (?) parvula Hall	(rr)

Paracyclas tennis Hall (?) or possibly the young of P. lirata (Con.) Hall	(rr)
Coleolus tenuicinctum Hall	(rr)
Hyolithes aclis Hall (?)	(rr)
Loxonema delphicola Hall	(r)
Pleurotomaria lucina Hall (?)	(rr)
Phacops rana (Green) Hall	(r)
Homalonotus dekayi (Green) Em	(rr)
Dalmanites (Cryphæus) boothi (Green) Hall	(rr)
Chonetes setigera Hall	(r)
Actinopteria decussata Hall	(rr)
Cf. Pterinopecten vertumnus Hall	(rr)
Bellerophon sp	(rr)

No. 1476 F5.—On the brink of the cascade, just above Sawkill Falls, are blue, rather coarse shales, with fossils abundant in layers, but elsewhere they are rare. Lamellibranch and Brachiopod shells, with Bryozoa, are present; but neither corals nor a stratum similar to the coral bed in Saw Creek near Bushkill, and other localities, was seen. I am not sure that the cascade is exactly the horizon for this zone in the creek, but it is near the beginning of the rather coarse arenaceous Hamilton shales, which are well shown farther down the creek. The zone above called Genesee is the blue argillaceous shale of the Hamilton, and a good collection of the characteristic smaller Lamellibranchs of this zone of the Hamilton was secured.

FAUNA OF NO. 1476 F5.

Palæoneilo constricta (Con.) Hall	(rr)
Microdon (Cypricardella) bellistriatus (Con.) Hall	(rr)

No. 1476 F6.—At about the middle of the cascade above Sawkill Falls, is a layer containing a mass of shells in which Crinoid stems are present while *Spirifers* as well as several other species are abundant. This may possibly represent the coral stratum. The rock is heavier and more arenaceous than that above the cascades. Beginning in the nearly vertical part of the Sawkill Falls, the rocks change to the coarse, arenaceous Hamilton shales, which are at their base in the bed of the creek.

FAUNA OF NO. 1476 F6.

Spirifera mucronata (Con.) Bill	(a)
Spirifera granulifera Hall	(a)
Spirifera medialis Hall	

> These two species are abundant, but the condition of casts in which they occur renders it difficult to discriminate specifically between many of the specimens. A few external impressions show very clearly the presence of granules, and other specimens have the characteristic form of S. medialis.

Orthis vanuxemi Hall	(c)
Atrypa reticularis (Linné) Dalm	(rr)
Tropidoleptus carinatus (Con.) Hall	(r)
Orthonota undulata Con	(rr)
***Microdon* (Cypricardella) bellistriatus (Con.) Hall**	(rr)

Loxonema hamiltoniæ Hall	(rr)
Strophodonta sp	(rr)
Discina sp	(rr)
Orthoceras sp	(rr)
Bryozoa	

Prof. White described the upper portion of the Sawkill Canyon as follows: "Beginning one-quarter of a mile up the stream from the main falls, we find the Sawkill flowing between banks of drift, which it here cuts through, and rapidly excavates a long narrow canyon out of the Genesee shale. This trench is 110 feet deep where the falls begin, only about 50 feet wide at top, and 10 to 15 feet at the bottom. The first descent is a fall of 20 feet in two cascades over the fossil coral bed at the base of the Genesee; then the stream spreads out on a broad gently sloping platform of gray Hamilton rock, to fall into the great abyss below in a vertical plunge of 60 feet. * * * The fossil coral bed at the top of the large fall is a dark blue slaty rock filled with corals, and also many fossil shells."[1]

SECTIONS NEAR PORT JERVIS, N. Y.

No. 1477 A—1.—At the northern end of the city near the base of the steep hill is an exposure of bluish-black fine shales, which are probably Marcellus, and above, up the steep hillside, are ledges of coarse, arenaceous shale, which are of Hamilton age. The exposure is at a point where riprap has been taken out extensively for the streets of the city.

No. 1477 A1.—The ledges forming the high hill immediately north of Port Jervis are composed of coarse arenaceous shales and sandstones, which belong to the lower part of the Hamilton stage.

FAUNA OF NO. 1477 A1.

Tropidoleptus carinatus (Con.) Hall	(rr)
Spirifera medialis Hall	(rr)
Spirifera mucronata (Con.) Bill	(rr)
Cyrtina hamiltonensis Hall	(rr)
Bryozoa.	

No. 1477 A2.—A ledge of coarse-grained sandstone with coarse arenaceous shales, on eastern side of the road, 1½ miles north of Port Jervis. This is the first ledge after passing those so well exposed in, and extending a mile north of, Port Jervis. Some of the layers of this ledge contain great numbers of shells, principally *Spirifera granulifera* Hall.

FAUNA OF NO. 1477 A2.

Spirifera granulifera Hall	(aa)

A large number of specimens in a coarse-grained sandstone, which is very much indurated, and most of the specimens are internal or external impressions on which the finer markings are not preserved. Some of the specimens may be S. medialis Hall, but owing to the condition of preservation it is hardly possible to identify them.

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[1] G^{6}, p. 199.

Nucula corbuliformis Hall	(a)
Nuculites cuneiformis Con. (?)	(rr)
Chonetes coronata (Con.) Hall	(c)
Tropidoleptus carinata (Con.) Hall	(rr)
Pterinea flabellata (Con.) Hall	(rr)
Modiomorpha concentrica (Con.) Hall (?)	(rr)
Modiomorpha cf. subalata (Con.) Hall.	(rr)
Leda rostellata (Con.) Hall	(rr)
Ambocœlia umbonata (Con.) Hall	(r)
Leiorhynchus multicosta Hall	(rr)
Spirifera mucronata (Con.) Bill	(c)
(?) Terebratula sp	(r)

No. 1477 A3.—A short distance farther up the road are coarse, quite fossiliferous, arenaceous shales, forming ledges on the hillside above the highway. Above these, farther up the hillside, the shales become more argillaceous, split up into finer pieces, and contain the smaller Lamellibranchs. This zone is apparently near the horizon called Genesee by Prof. White, and the transition is not far south of a private bridge across the Delaware and Hudson Canal.

FAUNA OF NO. 1477 A3.

Tropidoleptus carinatus (Con.) Hall	(aa)
Orthis vanuxemi Hall	(a)
Modiomorpha concentrica (Con.) Hall	(rr)
Microdon (Cypricardella) bellistriatus (Con.) Hall	(rr)
Palæoneilo constricta (Con.) Hall	(rr)
Nucula corbuliformis Hall	(r)
Nuculites oblongatus Con	(r)
Tellinopsis subemarginata (Con.) Hall	(r)
Pholadella radiata (Con.) Hall (?)	(rr)
Grammysia constricta Hall	(rr)
Orthonota (?) parvula Hall	(rr)
Orthonota undulata Con	(rr)
Paracyclas lirata (Con.) Hall	(rr)
Grammysia arcuata (Con.) Hall (?)	(rr)
Modiella pygmæa (Con.) Hall	(rr)
Homalonotus dekayi (Green) Em	(rr)
Loxonema hamiltoniæ Hall	(rr)
Bellerophon leda Hall	(rr)
Spirifera mucronata (Con.) Bill	(c)
(?) Cryptonella planirostra Hall	(rr)
Glyptodesma erectum (Con.) Hall	(rr)
Cyrtina hamiltonensis Hall	(rr)
Coleolus tenuicinctum Hall	(rr)

DELAWARE RIVER SECTION.

No. 1477 A8.—A ledge of rock on the eastern side of the highway, forming quite a steep hill, one-fourth of a mile south of Sparrowbush. Rather coarse arenaceous shales, containing numerous fossils in certain layers. This outcrop as mapped by Prof. White is probably near the top of the Hamilton, the Genesee zone forming the next covered slope to the north. Possibly the covered slope to the south is his Genesee, in which case this exposure would be the base of the Chemung according to his correlation.

Prof. White states: "It [the Genesee] is well exposed along the Delaware river on the New York shore, 2 miles above Port Jervis, where it is seen dipping north 25°, west 10° to 11°, and exhibiting clearage planes at a high angle to the southeast. It is also quite fossiliferous, containing *Spirifer mucronatus*, *Athyris spiriferoides*, *Microdon bellistriata*, *Tropidoleptus carinatus*, and many other forms."[1] Prof. Lesley says the Genesee makes its appearance "at the ninetieth milepost of the Erie Railroad" and describes it as composed of " dark sandy slates, 200 feet thick, holding *Spirifera mucronata*, *Athyris spiriferoides*, *Tropidoleptus carinatus*. (?)"[2] It seemed odd to the writer when he first saw the statement that these rocks were called Genesee, because the fossils enumerated have never been regarded as characteristic Genesee species in New York. This will be immediately appreciated on noting the range of the species mentioned: *Spirifera mucronata* (Con.) Bill. occurs in the Marcellus, Hamilton, and doubtfully in the Portage of eastern New York; *Athyris spiriferoides* (Eaton) Hall, in the Upper Helderberg and Hamilton; *Microdon bellistriatus* (Con.) Hall, in the Hamilton, Ithaca, Portage of eastern Pennsylvania, and Chemung; *Tropidoleptus carinatus* (Con.) Hall, in the Hamilton, Portage, Portage of eastern New York and Pennsylvania, Oneonta, and Chemung.

FAUNA OF NO. 1477 A8.

Tropidoleptus carinatus (Con.) Hall	(aa)
Spirifera mucronata (Con.) Bill	(aa)
Spirifera tullia Hall (?)	(rr)
Palæoneilo constricta (Con.) Hall	(r)
Nuculites triqueter Con	(rr)
Palæoneilo emarginata (Con.) Hall	(rr)
Nucula bellistriata (Con.) Hall	(rr)
Palæoneilo muta Hall	(rr)
Palæoneilo maxima (Con.) Hall	(rr)
Nucula corbuliformis Hall	(r)
Nuculites oblongatus Con	(c)
Nuculites cuneiformis Con	(rr)
Goniophora hamiltonensis (Hall) Mill	(rr)
Microdon (Cypricardella) tenuistriatus Hall (?)	(c)
Tellinopsis subemarginata (Con.) Hall	(rr)
Pholadella radiata (Con.) Hall	(rr)
Leda diversa Hall	(rr)
Grammysia bisulcata (Con.) Hall	(rr)
Cimitaria corrugata (Con.) Hall	(rr)
Hyolithes aclis Hall	(rr)
Tentaculites bellulus Hall	(c)
Actinopteria boydi (Con.) Hall	(rr)
Cyrtina hamiltonensis Hall	(rr)

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[1] G^4, p. 108.

[2] Sum. Desc. Geol. Penn., Vol. II. p. 1217, footnote; see in addition p. 1325.

Chonetes setigera Hall	(a)
Chonetes scitula Hall	(c)
Nucleospira concinna Hall	(rr)
Spirifera granulifera Hall	(rr)
Athyris spiriferoides (Eaton) Hall	(rr)
Leiorhynchus multicosta Hall	(rr)
Coleolus tenuicinctum Hall	(rr)
Psilophyton princeps Du	(rr)
Pleurotomaria capillaria Con. (?)	(r)
Bellerophon acutilirata Hall	(rr)
Lingula sp	(rr)
Trilobite, fragment of glabella	(rr)
Spirophyton sp	(rr)

No. 1477 A7.—Exposures on the Pennsylvania side of the Delaware River, a little above Sparrowbush and opposite the ninetieth New York mile-post on the Erie Railroad. These are coarse arenaceous blue shales and sandstones, some layers being of concretionary structure. Dip about 8°, 25° west of north. Fossils not common, but in a rather blocky shale several Hamilton species were found.

FAUNA OF NO. 1477 A7.

Orthis vanuxemi Hall (?)	(rr)
Spirifera mucronata (Con.) Bill	(c)
Leiorhynchus sp	(a)
The specimens have the form of L. multicosta Hall, but are without plications on the sides, and in this respect agree with L. mesacostalis Hall.	
Glyptodesma erectum (Con.) Hall (?)	(rr)
Palæoneilo emarginata (Con.) Hall	(rr)
Paracyclas lirata (Con.) Hall	(r)
Pholadella radiata (Con.)	(rr)
Nuculites corbuliformis Hall	(c)
Leda diversa Hall (?)	(rr)
Cyrtolites (Crytonella) pileolus Hall	(rr)
Productella sp	(rr)
Dalmanites (Cryphæus) boothi (Green) Hall (?)	(rr)

No. 1477 A4.—On the western bank of the Delaware River, just below the New York, Lake Erie and Western Railroad bridge, are shales and sandstones which belong in the Chemung of Prof. White. The course of the river at this point is nearly from north to south, and not far below the bridge the dip on the edges of the layers is from 5° to 10° nearly due north. A little farther south the dip is only slightly to the north, while still farther south, where the river strikes the almost vertical cliff, the dip is greater toward the north. It is probable that this dip on the face of the layers to the north does not represent the greatest dip of the rocks at this locality. Some of the joints in the rock enter the river at about 32° east of north. The exposure consists of thin, blue sandstones, alternating with bluish, rather arenaceous shales. There are concretionary layers at irregular intervals and some layers of sandstone with an undulating or warped structure. Fossils are comparatively rare in the shales, and still more so in the sandstones. The blue sandstone is quite similar to the blue quarry stone along the

on river in Ulster and Green counties, called commercially the
th River stone." The ninty-first milepost is in the first railroad
short distance north of the railroad bridge, at which locality is a
xposure of the irregular concretionary structure, some of the
etions being very large. Prof. White stated: "The Chemung
rise from the Delaware about 300 yards above the ninety-second
York milepost on the Erie Railroad. This is about one-half mile
the Erie Railroad bridge and 4$\frac{1}{6}$ miles from Port Jervis."[1] It is
clear that the ninety-first milepost is meant, since the distance
the railroad bridge shows that it is not the ninety-second one.

FAUNA OF NO. 1477 A4.

ra mesastrialis Hall	(rr)
eilo emarginata (Con.) Hall	(rr)
iversa Hall	(r)
on (Cypricardella) tenuistriatus Hall (?), possibly M. gregarius Hall, but it resembles the former more closely	(rr)
ota carinata Con	(rr)
eilo plana Hall	(rr)
clas lirata (Con.) Hall	(rr)
ysia subarcuata Hall (?)	(rr)
orpha mytiloides (Con.) Hall (?)	(rr)
all specimen which closely resembles the young forms of this species as given in figs. 2 and 3 on Pl. XXXVIII (Geol. Surv. N. Y., Palæontology, Vol. V, Pt. I, Lamellibranchiata II).	
morpha subalata (Con.) Hall var. chemungensis Hall(?)	(rr)
ynchus sp., specimens intermediate between L. multicosta Hall and L. mesacostalis Hall	(rr)
pteria boydi (Con.) Hall	(a)
lophyton princeps Dn., broken fragments of plant stems	(r)
nia sp., or possibly Discina sp	(rr)

1477 A5.—Exposures of bluish sandstone and shales on the western
of river about opposite the Saw Mill Rift siding of the Erie Rail-
and a little more than 900 feet above the ninety-first milepost.
is probably near the horizon of the place indicated by Prof.
e as the top of the Chemung, since on the opposite side of the
a short distance above this point, heavy sandstone ledges begin
pear which are probably Starucca.) The upper exposures at this
ty are thin greenish-gray sandstones, alternating with blue argil-
us shales. A little farther down, one of the heavy irregular layers
r the level of the river, and the sandstones of this exposure are
and fine grained. The blue shales contain fragments of some
s, as *Homalonotus dekayi* (Green) Emm.

FAUNA OF NO. 1477 A5.

onotus DeKayi (Green) Emm	(rr)
nelio emarginata (Con.) Hall var. (?)	(rr)
ilophyton princeps Dn	(rr)
oid shell	(rr)
opod shell	(rr)

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[1] G^6, p. 194.

No. 1477 A6.—Exposures along the high bluff on the east side of the Delaware River, near the point on the highway called the Hawks Nest, 4 miles above Port Jervis. This locality is farther up the river than Saw Mill Rift on the opposite side. There are coarse grayish sandstones, with argillaceous blue to olive shale partings. Near the narrowest part of the road is a layer of blue argillaceous shale, just above a sandstone stratum, that contains *Archæopteris sphenophyllifolia* Lx., of which several good specimens were obtained that agree well with Lesquereux's description.[1] Through the kindness of Mr. Lacoe these specimens have been compared with the type specimen and figure, one frond of which is fully as well preserved as the type specimen from Meshoppen, Pa. This species has been reported from the lower Catskill of Meshoppen, Wyoming County, Pa. Fronds of *Haliserites* occur, similar to *H. Dechenianus* Göpp, var. *lineatus* Pn.,[2] which is found at Lanesboro, Pa., and a few other localities near this geologic horizon.

The dip along a north and south line is between 10° and 12° to the north.

No. 1477 B1.—In the Erie Railroad cut, just west of Pond Eddy, is a prominent layer of cornstone 4 to 5 feet in thickness, in the midst of the Delaware flags, which are massive greenish-gray sandstones. Dip along an east and west line varies from 1° to 5° in the different layers.

No. 1477 B2.—The New Milford red shale, just below Pond Eddy station, is not much over 15 feet in thickness. It is exposed for about 100 feet, with an average dip of 8°, and 50 feet farther with a dip of about 4°, making a thickness of 17 feet for the shale.

No. 1477 B3.—This station is a quarry, a short distance below Stairway, and opposite the ninety-sixth New York milepost on the Erie Railroad. On a smooth bedplane there is a dip of 9° between 25° and 30° west of north; on the side of the quarry the dip is hardly so great. Near the top of the quarry, in an argillaceous, olive, shaly stratum, are specimens of *Psilophyton princeps* Dn., which are not very abundant. At Barryville, Sullivan County, N. Y., in a quarry one-half mile up Halfway Brook, is a bluish-gray sandstone quarried for flagging. The dip is apparently about 40° west of north, while in an old quarry on the southside of the brook, nearer the village, the dip is 6° between 30° and 40° east of north. There are extensive flagstone quarries near Shohola.

Along the New York, Lake Erie and Western Railroad, from Shohola, Pa. (opposite Barryville), to Lackawaxen, the rocks consist of greenish-gray sandstone, with partings of olive and red shales. No fossils were seen in these rocks, except plant stems, which show no fronds. Near the northern end of the first railroad cut, west of the one hundred and eleventh New York milepost and Lackawaxen, in a mealy shale, were found a few poorly preserved pinnules of *Archæopteris*, with numerous fern stems; and in association with these, in the greenish argillaceous shales, specimens of *Haliserites*.

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[1] 2d Geol. Survey, Penna., p. 3, Coal Flora, Vol. III, p. 775.

[2] Proc. Nat. Mus., Vol XVI, p. 109, Pl. X, fig. 7.

In a quarry south of Narrowsburg, N. Y., and one-half mile up the hillside, is a good exposure of the greenish-gray, coarse-grained flagstone. A dip of 4° to 5°, 20° to 30° west of south, is shown in the quarry. In an old quarry three-fourths of a mile south of Narrowsburg, and in ledges along the western slope of the hill, are numerous exposures of the greenish-gray sandstone, with argillaceous shale partings. Some of the finer of these shales contain fragments of *Archæopteris*. At several places along the ledges are good examples of current bedding. The dip on the floor of the quarry is about 5° between 30° and 40° east of north. An outcrop of red shale occurs a few rods north of the quarry.

The section along the line of the Delaware River was not examined west of Narrowsburg, and, with the exception of plants, no fossils were found above Saw Mill Rift. The zone above Henryville, on the Delaware, Lackawanna and Western Railroad, was not detected along the Delaware River.

NEVERSINK RIVER SECTION.

After making the section along the Delaware River, the strike of the Middle and Upper Devonian was followed northeast from Port Jervis, through Orange. Sullivan, Ulster, and Greene counties, N. Y.

No. 1478 A1.—At Rose Point, on the Monticello and Port Jervis Railroad, 8 miles northeast of Port Jervis, is a good exposure of arenaceous shales and sandstones by the railroad, at the base of the hill. In the gravel quarry at the southern end are thin, black, argillaceous shales alternating with thin sandstones. The base of some of the sandstone layers is pebbly. This horizon is apparently near the dividing line of the Marcellus and Hamilton. A little farther north, *on the western side* of the railroad, is an excellent exposure of

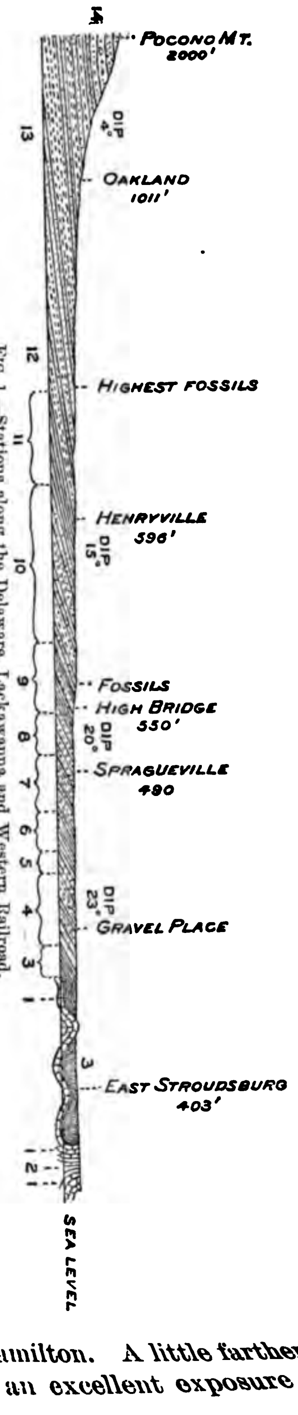

FIG. 1.—Stations along the Delaware, Lackawanna and Western Railroad. Horizontal scale, 2½ miles to the inch. Vertical scale, 500 feet to the inch.

1. Upper Helderberg (Corniferous limestone). 2. Cauda-galli grit. 3. Marcellus shales. Hamilton. 5. Tully limestone of Professor White. 6. Genesee shale of Professor White. 7. Chemung and Portage of Professor White. 8. Starucca sandstone (Upper Chemung of White). 9. New Milford red shale. 10. Delaware river flags. 11. Montrose red shale. 12. Honesdale sandstone. 13. Upper Catskill. (9 to 13 Catskill.) 14. (?) Mt. Pleasant Conglomerate (Pocono).

coarse blue arenaceous shales, with sandstones 1 foot or more in thickness, belonging to the Hamilton stage.[1] Fossil shells are abundant, and in some of the shale a few fossil plants were found. The dip is 45°, about 30° west of north.

FAUNA OF NO. 1478 A1.

Spirifera granulifera Hall	(c)
Spirifera medialis Hall (?)	(rr)
Spirifera mucronata (Con.) Bill	(rr)
Tropidoleptus carinatus (Con.) Hall	(rr)
Nyassa arguta Hall	(c)
Nucula varicosa Hall	(rr)
Modiomorpha concentrica (Con.) Hall	(rr)
Chonetes mucronata Hall	(r)
Rhynchonella congregata (Con.) Hall	(r)
Athyris spiriferoides (Eaton) Hall	(r)
Chonetes deflecta Hall (?)	(rr)
Ambocœlia umbonata (Con.) Hall	(c)
Palæoneilo emarginata (Con.) Hall	(r)
Nucula corbuliformis Hall	(r)
Nuculites triqueter Con	(rr)
Palæoneilo constricta (Con.) Hall	(rr)
Palæoneilo plana Hall (?)	(rr)
Nyassa recta Hall (?)	(rr)
Modiomorpha subalata (Con.) Hall (?)	(c)
Macrodon hamiltoniæ Hall	(rr)
Grammysia bisulcata (Con.) Hall	(rr)
Homalonotus dekayi (Green) Emm	(r)
Dalmanites (Cryphæus) boothi (Green) Hall (?)	(rr)
Pleurotomaria sulcomarginata Con. or P. itys Hall	(c)
The specimens are internal impressions, some of which resemble one species closer and the remainder the other species.	
Bellerophon patulus Hall (?), possibly B. natator Hall	(rr)
Loxonema delphicola Hall	(rr)
Orthoceras crotalum Hall	(rr)
Conularia undulata Con	(rr)
Lepidodendron gaspianum Dn., with elliptical areoles which contain central leaf scars as described by Dawson	(rr)
(?) Psilophyton princeps Dn	(rr)
Pterinea flabellata (Con.) Hall	(rr)
Actinopteria boydi (Con.) Hall	(r)
Actinopteria decussata Hall (?)	(rr)
Streptorhynchus chemungensis (Con.) Hall	(rr)
Platyceras sp	(rr)

Two specimens of Pectinidæ.

No. 1478 A2.—Nearly 1 mile up the highway from Rose Point and 200 feet higher, just below Mr. M'Carron's house, are ledges of thin flaggy stone which split into layers between one-half and 1 inch in thickness. The stone is very arenaceous, of slightly greenish tint, and may be called a sandstone with very thin layers. Fossils are common, especially *Tropidoleptus carinatus* (Con.) Hall and *Spirifera mucronata* (Con.) Bill.(?). The rocks of this exposure, both in lithologic and paleontologic character, resemble closely the horizon in Pennsylvania and along the Delaware River, called Chemung by Prof. White, and by the writer are regarded as the continuation of that zone.

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[1] In MacFarlane's Am. Geolog. Railway Guide, 2d ed., p. 126, the age of the rocks at Rose Point is given as Chemung.

FAUNA OF NO. 1478 A2.

Spirifera mucronata (Con.) Bill. (?)	(aa)

Possibly these specimens ought to be called S. mesacostalis Hall, but they seem to belong to the former. A few specimens show a fold in the bottom of the sinus, and it is difficult to separate them from the form of S. mesacostalis given as fig. 5 on pl. 40 (Geol. Surv., N. Y., Palæontology, Vol. IV, Pt. I), also see variety of S. mucronata figured by Prof. H. S. Williams on pl. 12, fig. 13, Bull. Geol. Soc. Am., Vol. I.

Tropidoleptus carinatus (Con.) Hall	(a)
Palæoneilo constricta (Con.) Hall	(rr)
Cyrtina hamiltonensis Hall	(rr)
Microdon (Cypricardella) gregarius Hall	(c)
Paracyclas lirata (Con.) Hall	(rr)
Modiomorpha subalata (Con.) Hall (?)	(rr)
Actinopteria boydi (Con.) Hall (?).m	(rr)
Chonetes mucronata Hall (?)	(rr)
Chonetes setigera Hall	(rr)

No. 1478 A3.—This exposure is the Meyers quarry near the top of the hill, north of the highway, and about 430 feet higher than A2, or 630 feet above the railroad level at Rose Point. The rock is mainly a bluish-gray flagstone separated by partings of shale, and the sandstone is quarried for flagging. An occasional stratum of sandstone shows a slight reddish tint, while in some of the shale are masses of fern stipes without pinnules, and possibly some of *Psilophyton*. Somewhat lower, on the hillside, is a ledge which has a dip of 13° between 10° and 20° west of north, and a northeast and southwest strike.

No. 1478 B1.—Just northwest of Cuddebackville, a station on the Summitville Division of the New York, Ontario and Western Railroad, 1 mile northeast of Rose Point, is a low hill, at the base of which are black, argillaceous shales with some arenaceous layers. The Summitville level of the Delaware and Hudson Canal is 610 feet A. T., which level extends from near Rose Point to Summitville, and these shales are about 45 feet higher, or with an approximate altitude of 655 feet. A little higher than the lower exposures, along a wood road, are abundant Hamilton fossils, especially *Tellinopsis subemarginata* (Con.) Hall, in association with the species which are usually common in the black, argillaceous Hamilton shales. It is reasonably sure, from the stratigraphic position, lithologic character, and the fauna, that this zone is the continuation of the horizon considered by Prof. White as "Genesee" in Pennsylvania.

FIG. 1.—Stations along the Delaware, Lackawanna, and Western Railroad.

FAUNA OF NO. 1478 B1.

Paracyclas lirata (Con.) Hall	(a)
Nuculites oblongatus Con	(rr)
Nucula bellistriata (Con.) Hall	(rr)
Tellinopsis subemarginata (Con.) Hall	(c)

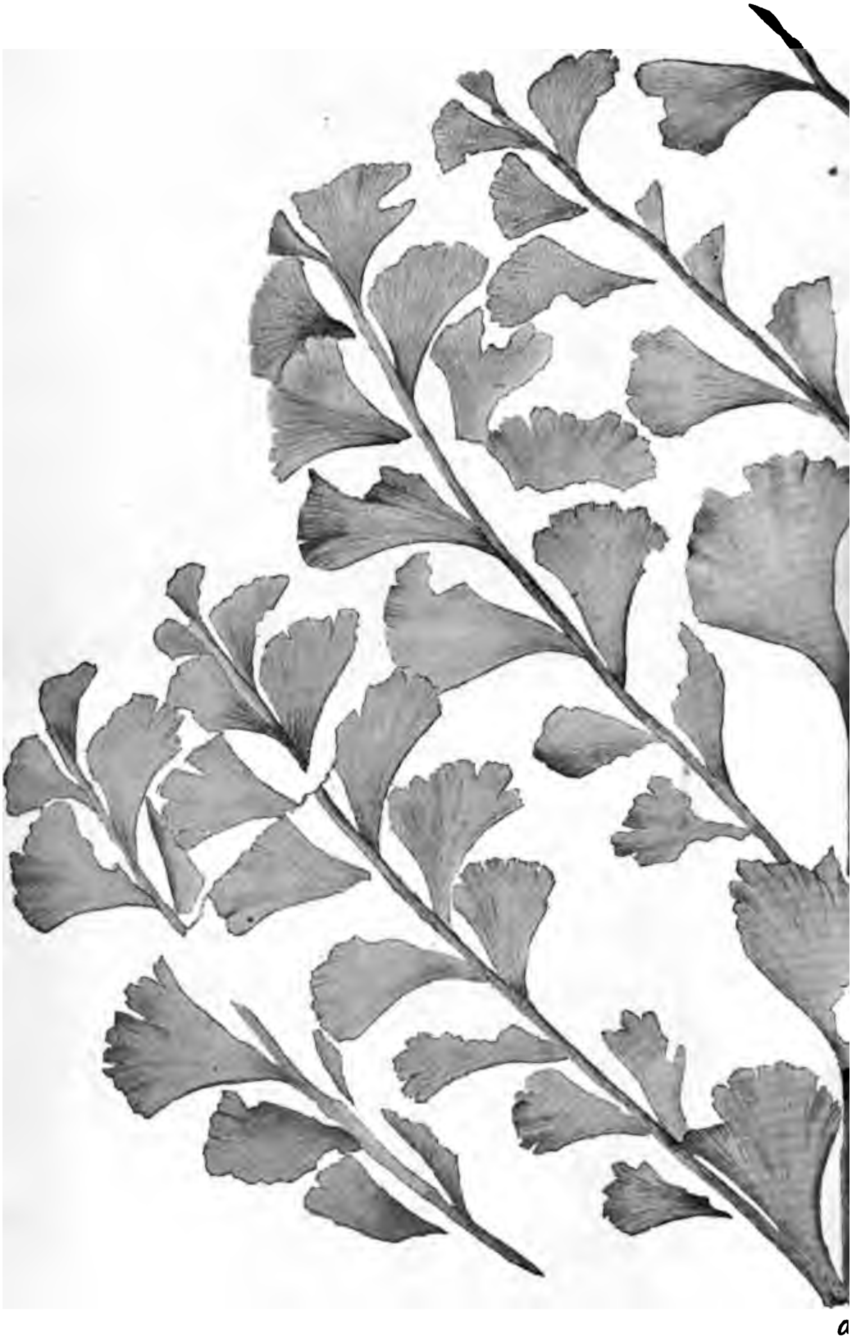
Modiella pygmæa (Con.) Hall	(r)
Leda rostellata (Con.) Hall	(rr)
Nucula corbuliformis Hall	(r)
Nuculites triqueter Con	(rr)
Modiomorpha mytiloides (Con.) Hall	(c)
Modiomorpha subalata (Con.) Hall (?)	(rr)
Macrodon hamiltoniæ Hall	(rr)
Lunulicardium fragile Hall	(rr)
Spirifera fimbriata (Con.) Hall	(r)
Ambocœlia umbonata (Con.) Hall	(a)
Chonetes setigera Hall	(r)
Chonetes mucronata Hall (?)	(rr)
Chonetes scitula Hall (?)	(rr)
Spirifera mucronata (Con.) Bill	(r)
Nucula Randalli Hall (?)	(rr)
The specimen is longer than any of the forms figured by Prof. Hall.	
Dalmanites (Cryphæus) Boothi (Green) Hall	(rr)
Phacops rana (Green) Hall	(rr)
Pleurotomaria sulcomarginata Con. (?)	(r)
Bellerophon crenistria Hall (?)	(rr)
Orthoceras crotalum Hall	(rr)
Grammysia sp	(rr)
Bellerophon sp	(rr)
(?) Leiopteria sp	(rr)
(?) Pterinopecten sp	(rr)
Crinoid stems.	

No. 1478 B2.—On the hill about 1 mile west of Port Orange, in Deer Park school district No. 11, near the county line, is the Weingardner quarry. Port Orange station is 1 mile above the Cuddebackville station, and the quarry is about 410 feet above the canal, or with an approximate elevation of 1,020 feet A. T. The dip in this quarry is heavy, varying from 24° to 28°, and the direction is apparently between 20° and 30° north of west. Near the bottom of the quarry, the dip is irregular; while farther north, along the ridge, is an old quarry in which the workmen report a greater dip. The stone is the bluish Hamilton sandstone which splits into flags 1 to 2 inches in thickness, with shaly sandstones and shales forming partings. In the strata, near the bottom of the quarry, are a good many fossil shells of large Lamellibranchs, as *Glyptodesma* and *Grammysia*, while specimens of *Lepidodendron*, called "fossil snakes" by the quarrymen, were also found.

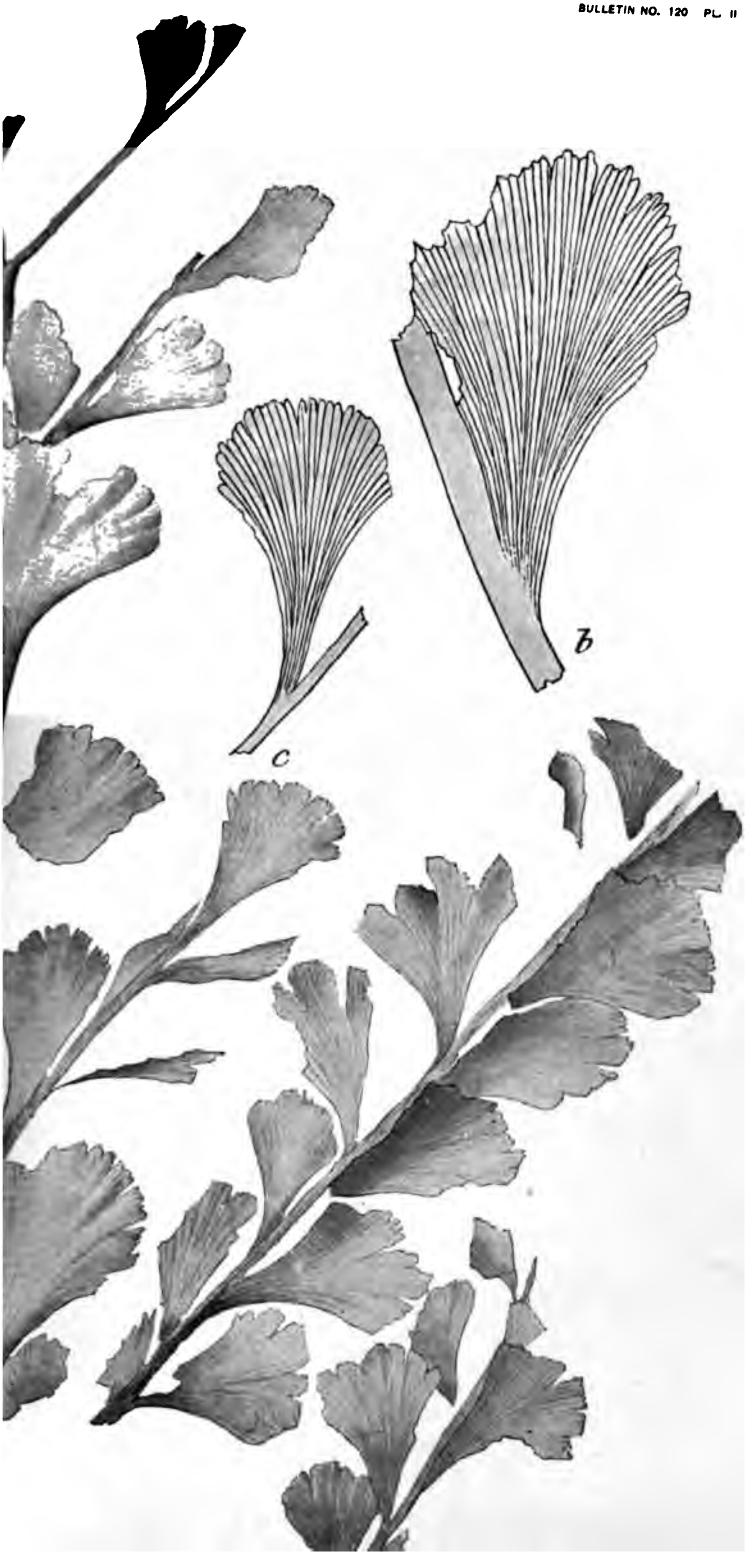
Shells are not common in the upper layers of the quarry. The workmen showed me crystals of quartz, galena, zinc, and iron pyrites from a small vein in the quarry.

FAUNA OF NO. 1478 B2.

Glyptodesma erectum (Con.) Hall	(aa)
Actinopteria boydi (Con.) Hall (?)	(r)
Spirifera granulifera Hall	(rr)
Homalonotus dekayi (Green) Emm	(rr)
Grammysia magna Hall	(rr)
Grammysia bisulcata (Con.) Hall	(rr)
Sphenotus cuneatus (Con.) Hall (?)	(rr)
Lepidodendron sp.	



a. ARCHÆOPTERIS OBTUSA LX., CATSKILL,
b. DETAIL OF PINNULE BETWEEN THE U
DETAIL OF PINNULE OF ULTIMATE



CIA, ULSTER COUNTY, N. Y.
PINNÆ IN SAME SPECIMEN

No. 1478 C1.—On the hill, 2 miles north of west of West Brookville, which is 3 miles northeast of Cuddebackville, is the old Ferris quarry, which is about 610 feet above the canal level, and consequently has an approximate altitude of 1,220 feet A. T., being over 200 feet higher than the Weingardner quarry. The rock is a coarse, gray sandstone with partings of greenish to olive argillaceous shale. No fossils were found. The dip, measured on bed planes in the quarry, is between 18° and 20°, about 40° west of north. The stratigraphic position of this horizon seems to be that of the coarse, greenish gray sandstone of eastern Pennsylvania, named by Prof. White the Starucca sandstone.

No. 1478 C2.—An old quarry, nearly 1 mile up Fall Brook after its junction with the main kill. The quarry stone is gray, coarse-grained sandstone which has a dip of 14° between 30° and 35° west of north. Somewhat below the quarry, loose red shale was noticed which had not been carried from any great distance.

No. 1478 D1.—Wurtsboro, Sullivan County, is 9 miles northeast of Cuddebackville, or 4 miles southwest of Summitville which is on the main line of the New York, Ontario and Western Railroad. Nearly 2 miles northwest of the village and more than 500 feet higher, is the Clark quarry, which was operated by Charles Green in 1891. The flagging is rather coarse-grained, gray sandstone, covered with a considerable thickness of greenish to olive-colored argillaceous shale. The dip of the lowest bed exposed is 19°, while the highest shows a dip of 12° on the bed planes about 20° west of north. The olive shale contains fossil plants, several good specimens of *Archæopteris obtusa* Lx. having been obtained. Mr. Green stated that earlier in removing the stripping, quite a number of excellent specimens of ferns were found, which, unfortunately had been destroyed. Two paleobotanists referred these specimens to *Archæopteris hibernica* (Forbes) Lx., and although my first identification was with *A. obtusa* Lx. it was thought best to confer with a recognized authority in reference to the identification of this species. Two specimens from this quarry were submitted to Sir William Dawson, who wrote: "these specimens are *Archæopteris obtusa* Lx., characteristic of the Upper Devonian. The pinnules on the rhachis [which these specimens have and which Lesquereux gave as characteristic of *A. hibernica* (Forbes) Lx. and *A. Halliana* (Göpp) Lx.][1] occur in different species of *Archæopteris*. These are quite too large for *A. hibernica* and different in form. * * *

"I am very much interested in the large fronds of *A. obtusa*. Would it not be possible in searching the beds, to find the fruit? It should be in oval capsules like that of *A. hibernica*, on special fertile pinnæ."[2] The main difficulty in identifying these specimens arose from comparing them with two specimens kindly loaned me by Mr. Lacoe, one of which was identified by Lesquereux as *A. obtusa* and the other as *A. hibernica*; while my specimens were nearer the *A. hibernica* than the

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[1] 2d Geol. Surv. Penn., P^3 (Coal Flora, vol. III), p. 773.

[2] Letter of Sir William Dawson, March 1, 1892.

A. obtusa. Later, these two specimens were sent Sir William Dawson who identified both as *A. obtusa.*[1]

Archæopteris obtusa was described without figure under the name of *Nœggerathia obtusa* by Lesquereux in the Jour. Bost. Soc. Nat. Hist., Vol. VI, 1854, p. 415, as simply from Pennsylvania. The species is figured in the Geol. Penn, Vol. II, pt. II, 1858, pl. I, fig. 11, and on p. 854, Lesquereux states that it is from the "Red sandstone of the Ponent group [Catskill], Lehigh, below the Mauch Chunk Gap." Lesquereux, Am. Jour. Science, 2d ser., Vol. XXXII, 1861, p. 200, stated that he had "lately received from Prof. J. D. Dana, of New Haven, the figure of a splendid specimen of *Nœggerathia obtusa*, found in the old Red Sandstone [Catskill] of Montrose, Pa." A portion of the frond of this fern was figured by Dana in the Man. of Geology, 2d ed., 1875, fig. 557*a* on p. 279. Fontaine, Am. Jour. Science, 3d ser., Vol VII, 1874, p. 578, reported this species from Lewis Tunnel, Virginia, which he then called Catskill, but later changed to Vespertine (Pocono).

Lesquereux (2d Geol. Surv. Penn., P, 1880, Pl. XLIX, Figs. 6, 7, p. 301) redescribed the species under the name of *Archæopteris obtusa*, and changed the age of the locality below Mauch Chunk, from the Catskill to the Vespertine [Pocono].

Dawson, Foss. Plants Erian (Dev.) Up. Sil., Canada, Pt. II, 1882, Pl. XXII, p. 100, under the name of *Cyclopteris obtusa*, reported it from the Upper Erian (Devonian) of Scaumenac Bay, opposite Dalhousie, New Brunswick. Dr. Dawson also stated that he had a specimen from the Catskill, at Franklin [Delaware County], N. Y. [It is probable that the age of the horizon at Franklin is not later than Chemung, although since the exact locality is not given, it may have been from the lower part of the Catskill.] Dawson further states that the specimens from the Middle Devonian shales at St. John, New Brunswick, referred by him to this species (Quart. Jour. Geol. Soc., Vol. XVIII, 1862, Pl. XV, fig. 33, p. 319), belong to a different species, as stated by Lesquereux (2d Geol. Surv. Penn., P, pp. 301, 302), and is renamed *Aneimites obtusa.*

Lesquereux (2d Geol. Surv. Penn., P, Vol. III, 1884, p. 850) reported the species from the Catskill of Meshoppen, Wyoming County, Pa.

The range and distribution of the species may be tabulated as from the Catskill of Montrose and Meshoppen of Pennsylvania; Catskill or Chemung of Franklin, Delaware County, N. Y.; Catskill or Pocono below Mauch Chunk, Pa., and Lewis tunnel, Virginia; and the Upper Devonian of Scaumenac Bay, Quebec.

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[1] Letter of Sir William Dawson, March 31, 1892. While studying the species of *Archæopteris*, the writer found another instance of similar identification. In Mr. Lacoe's collection from Meshoppen, Pa., was a specimen identified by Lesquereux as *Archæopteris minor* Lx. In general character this specimen agreed more closely with *A. rogersi* (Dn.) Lx., and the rachis was clearly transversely rugose. In Lesquereux's key to the genus *Archæopteris* (2d Geol. Surv. Penn., P, Vol. III, p. 773), he put *A. minor* under Section B, "rachis striate lengthwise," and *A. rogersi* under Section D, "rachis transversely rugose." This specimen and the type specimen of Meek's *Cyclopteris alleghaniensis* from Virginia, which Lesquereux made a synonym for *A. rogersi* (ibid., P, p. 307), were sent to Sir William Dawson, who wrote me that the Meshoppen specimen "is certainly *A. Rogersi*, but *A. alleghaniensis* is quite distinct." (Letter of Sir William Dawson, March 1, 1892).

The *Haliserites* of Lanesboro, Pa., also occurs in this shale.

Along the quarry road, lower than the quarry, are exposures of red arenaceous shale. Ledges of moderately arenaceous shale occur in the upper part of the village and also along the hill on the western side of the highway, 1 mile north of Olcott's hotel, but no fossils were found. It seems that the fossiliferous rocks of the Hamilton and the lower part of the Portage are covered by the drift which has filled up the old river channel in the region of Summitville. At least no exposures were found containing fossil shells.

SECTION ALONG THE ULSTER AND DELAWARE RAILROAD.

After an examination of the rocks in the Summitville region, the next section crossing the Devonian formations is 25 miles to the northeast, in the vicinity of Kingston.

At Rondout, on the Hudson River, are exposures of Hudson shales and sandstones which extend from part way up the bluff to near the entrance of the quarries in the cement rock. This is a region of decided interest in respect to the stratigraphic geology, since most of the geologists who have studied it regard the Upper Silurian as resting unconformably on the Lower Silurian, while some consider it a fault.[1]

On the bluff above the Ulster and Delaware Railroad station in Rondout are good opportunities for studying the relations of the Hudson shales and sandstones to the overlying limestones. Along the West Shore Railroad south of Kingston are numerous exposures of the limestones and this is an excellent locality to work out the folding as has been so admirably done by Prof. Davis for this, and the same series of formations, farther north.[2]

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[1] For the more important papers see J. G. Lindsey, who described the rocks at the Rondout cement quarries, Poughkeepsie Soc. Nat. Sci., Proc., II, 1879, pp. 44–48; T. N. Dale, "The Fault at Rondout," Am. Jour. Sci., Vol. XVIII, 1879, pp. 293–295. On p. 294, figs. 1 and 2 give an excellent representation of the position of the Lower Helderberg beds on the Hudson River shales; William M. Davis, Bull. Mus. Comp. Zool., Geol. Ser., Vol. I, No. X, 1883, pp. 319–323, and on pl. XII see figs. 6, 11, 14, and 15, which give several views of the junction of the Hudson shales with the Coralline and Lower Helderberg limestones, while in the text is a complete review of all the literature in reference to this structure at Rondout.

Prof. Davis contributed a paper on "The Nonconformity at Rondout, N. Y.," to the Am. Jour. Sci., 3d ser., Vol. XXVI, 1883, p. 389, with a map on p. 391, showing the distribution of the different formations in the vicinity of Rondout, crossed by 6 cross-sections, showing the stratigraphic structure of that region. In reference to the exposures in the bluff near the cement quarries at Rondout, Prof. Davis says: "The Hudson River rocks were upheaved, exposed to erosive forces, presumably of the ordinary subaerial kind, and then submerged to receive the later formations on their worn edges. This is most excellently shown in the old quarry in the hill overlooking Rondout, where the contact line has been perfectly exposed for 10 feet or more; a fair inference of nonconformity can be made out at several other points along the slope" (pp. 392, 393). While in a later paper the professor, referring to Rondout, says, "there is a strong unconformity. * * The contact could not have been made by a fault; it was a distinct unconformity" (Bull. Geol. Soc. Am. Vol. I, 1890, pp. 354, 355).

[2] See paper on the folded Helderberg limestones east of the Catskills, "Bull. Mus. Comp. Zool., Geol. Series, Vol. I, 1883, p. 311; and in particular see Pl. XIII, which gives a map of "The folded Helderberg limestones in Greene County, N. Y.," crossed by fifteen sections showing the geologic structure of the region. Also a paper by the same author, entitled "The Little Mountains east of the Catskills," Appalachia, Vol. III, 1882, pp. 20–33, with Plate I, giving a map of the region, a series of block-sections, general section of the Little Mountain belt, section from the Catskills to the Hudson, and a series of seven special sections.

The first cut is a little more than one-fourth of a mile south of the Kingston station, just below Fitch's trestle, and the northern two-thirds of the cut is through bluish-gray massive limestone with an occasional layer of shale. Fossils are common, especially *Atrypa reticularis* (Linné) Dal. and *Strophomena rhomboidalis* (Wahlenb.) Dav. The rock is much darker in color at the southern end of the cut, has but few fossils, and becomes shaly and arenaceous. At the southern end of the Kingston tunnel on the West Shore Railroad, by the Rondout Creek railroad bridge are light gray limestone layers alternating with dark layers. The light grayish limestone contains abundant fossils and furnishes a most excellent locality for collecting. The light gray limestone at the southern end of the tunnel is regarded as the Catskill shaly limestone with Upper Pentamerus near the middle and, at the northern end, Oriskany. In the cuts nearer Kingston are the Cauda-galli grit and the Corniferous limestone.[1]

When conducting the field work upon which this paper is based, the writer was concerned principally with the Middle and Upper Devonian, and so ran over this section of the Upper Silurian and Lower Devonian in a hasty manner; but the admirable sections and opportunities for studying these formations were noted.

On the Walkill Valley Railroad, 1 mile from Kingston Union station, are exposures of limestones of Lower Helderberg age. About 2 miles from the station is a small cut in blue arenaceous shales (No. 1486 C1) which contains plenty of Hamilton fossils. At this locality the dip is nearly vertical.

The exposures along the Walkill Valley Railroad in the vicinity of Kingston are not numerous, most of the rocks being covered by drift. After leaving Kingston[2] and crossing the valley of Esopus Creek, there are frequent exposures of rocks along the line of the Ulster and Delaware Railroad which give a fair section across the Middle and Upper Devonian formations of Ulster County. The exposures along the line of this railroad will now be described.

The Fair street or Kingston station of the Ulster and Delaware Railroad is said to be on the Lower Helderberg limestone,[3] but no outcrops were observed at that locality. No exposures were found until after crossing the wide valley of Esopus Creek, west of Kingston, and reaching the hill to the west of the creek. There are exposures of black shale by the side of the highway east of the Ulster and Delaware Railroad track after crossing Esopus Creek and about 2 miles west of Kingston station of the Ulster and Delaware Railroad. The rock is a black, very argillaceous shale, which contains only a few fossils and belongs to the Marcellus stage. This outcrop is the second rather prominent ledge by the highway east of the railroad. The first one, just east of the tollgate, is a calcareous rock, which may represent the base of the Hamilton. The elevation of this exposure (1486 D1) is near that of the Fair street station of the Ulster and Delaware, possibly 10 to 15 feet higher.

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[1] See note by J. G. L. [Lindsey ?] in MacFarlane's Am. Geol. Rail. Guide, 2d. ed., p. 135, f. n. 152.

[2] The elevation of the eastern terminus of the Ulster and Delaware Railroad at Rondout is 6 feet A. T. (Bull. U. S. Geol. Surv., No. 5, p. 217); the union station in Kingston, of the Ulster and Delaware, West Shore, and Walkill Valley railroads is 186 feet A. T. (ibid., p. 211), and the Fair street, Kingston, station of the Ulster and Delaware, 159 feet A. T. (ibid., p. 211), consequently the difference by railroad levels between Rondout and the union station is 180 feet, and between the union station and Fair street, 27 feet. Several readings of the barometer gave me 175½ feet difference between Rondout and the union station, and between union station and Fair street, 22½ feet, which in both cases is 4½ feet less than the actual difference.

[3] MacFarlane's Am. Geol. Rail. Guide 2d ed., p. 130, and on "The Geological map of the Middle and Western States, by James Hall" (Geol. N. Y., Pt. IV, 1843), Kingston is represented on the belt colored *green*, which is stated in the legend to be "Helderberg limestones, including grits and sandstones."

No. 1486 D2.—First cut on Ulster and Delaware Railroad going west, after crossing Esopus Creek. This exposure, which is west of the Marcellus shales of D1, and perhaps 30 feet higher than the Kingston station on Fair street, is a blue, somewhat calcareous, fine-grained rock, with a conchoidal fracture. The dip is about 5° west of north, as shown in the side of the cut. Only a few fossils were found, *Chonetes* and *Aulopora* (?) being the most abundant.

No. 1487 A5.—In a cut west of the one just described, where the road from Jockey Hill joins the Kingston and West Hurley highway, east of Stony Hollow, are fine fissile shales, weathering to a brown. Lithologically these shales are similar to the Marcellus; but in the next railroad cut, not far to the east, are blocky Hamilton shales.

No. 1487 A4.—The first cut east of Stony Hollow shows rather coarse blue, arenaceous shales, in which fossils are common. The arenaceous layers have a dip of about 5° to the northwest, which is probably near the direction of the greatest dip. The cut is a little higher than Stony Hollow, which is 8 miles from Rondout, with an elevation of 410 feet A. T.[1] *Nuculites oblongatus* Con. is one of the most common fossils in this cut.

FAUNA OF NO. 1487 A4.

Nuculites oblongatus Con	(aa)
Nucula bellistriata (Con.) Hall	(a)
Nuculites triqueter Con	(c)
Paracyclas lirata (Con.) Hall	(c)
Palæoneilo constricta (Con.) Hall	(c)
Modiella pygmæa (Con.) Hall	(r)
Orthonota (?) parvula Hall	(rr)
Spirifera mucronata (Con.) Hall	(rr)
Rhynchonella cf. congregata Hall	(r)
Leiorhynchus multicosta Hall	(rr)
Athyris spiriferoides (Eaton) Hall	(rr)
Chonetes coronata (Con.) Hall	(rr)
Lingula alveata Hall (?)	(c)
Orthoceras constrictum Van. (?)	(rr)
Grammysia, two species, but too imperfectly preserved to identify specifically	(rr)
Bellerophon sp	(rr)
Leptodesma sp.	(rr)
Fenestella sp	(rr)

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[1] Van Loan's Catskill Mountain Guide, 1890, p. 75.

No. 1487 A3.—Another railroad cut, a short distance west of Stony Hollow, near a switch turning to the north, leading to an old flagstone quarry, and just east of the railroad fill over the swamp. The blue shales are rather blocky and contain fossils.

Fauna of No. 1487 A3.

Nucula bellistriata (Con.) Hall	(a)
Nuculites oblongatus Con	(rr)
Paracyclas lirata (Con.) Hall	(r)
Lingula alveata Hall (?)	(rr)

NO. 1487 A2—BRISTOL HILL.

At the eastern end of the first railroad cut, west of Bristol church, are exposures of fine, blocky, blue shales, in which Hamilton fossils are abundant, the specimens being more numerous than in any of the other outcrops along the line of the railroad. In the long railroad cut to the west, after crossing the trestle, some of the sandstone layers show a dip of between 4° and 5° to the west; while exposures south of the railroad, at the western end of the cut, show that the dip is probably to the northwest.

Fauna of No. 1487 A2.

Chonetes coronata (Con.) Hall	(aa)
Eighty-five specimens.	
Nyassa arguta Hall.	(aa)
Forty specimens.	
Nuculites oblongatus Con	(rr)
Prothyris lanceolata Hall	(rr)
Paracyclas lirata (Con.) Hall	(c)
Orthonota (?) parvula Hall	(rr)
Microdon (Cypricardella) complanatus Hall	(r)
Tropidoleptus carinatus (Con.) Hall	(rr)
Cyrtina hamiltonensis Hall	(r)
Spirifera mucronata (Con.) Bill	(rr)
Spirifera ziczac Hall	(c)
Streptorhynchus chemungensis (Con.) Hall	(aa)
Forty-three specimens.	
Orthis, some of the specimens resemble O. vanuxemi Hall, but others do not appear to be this species and are nearer O. penelope Hall	(a)
Palæonielo constricta (Con.) Hall	(rr)
Sphenotus truncatus (Con.) Hall	(c)
Dalmanites boothi (Green) Hall	(r)
Prothyris planulata Hall	(rr)
Palæonielo maxima (Con.) Hall	(rr)
Schizodus appressus (Con.) Hall (?)	(rr)
Actinopteria boydi (Con.) Hall	(a)
Twenty-five specimens.	
Glyptodesma erectum (Con.) Hall	(rr)
Discina sp	(rr)

NO. 1487 A1.—WEST HURLEY.

A sandstone quarry of bluish stone in the village just south of the railroad. The dip is 5° or more and about 25° north of west. No fossils were found in this quarry.

From Stony Hollow to about 1 mile west of West Hurley the railroad crosses the main belt of the "Hudson River bluestone." This region is composed of a moderately level plateau of 500 feet or more elevation, and very generally near the surface is a stratum of fine-grained bluish-gray sandstone, in many places lying near the surface for an area of a number of acres. Near the railroad the best quarries have been worked so extensively as to exhaust the supply of good stone, especially in a number of the earlier quarries. The value of this region was described by Mather,[1] at which time the industry had reached considerable proportions, and an additional impetus was given by the opening of the railroads.

Stratigraphically, the lower portion of these quarries belongs in the Hamilton, and the upper part of the belt in the Portage, while the quarries still higher are in the Catskill, as stated by Prof. Smock in 1888.[2]

No. 1487 B1.—The Hurley Stone Crushing Company's quarry, formerly called Lawson's quarry, is one-half mile west of West Hurley. The quarry was formerly worked extensively for flagging stone, which has been mainly taken out, the stripping rendering it now unprofitable to work. Prof. Smock says where the stripping "is over 20 feet the quarry beds must be thick and the stone of good quality to pay for its removal. A rule is that the total thickness of quarry beds must not be less than one-third of the stripping."[3]

A New York company has been formed, called the "Hurley Stone Crushing Company," which has put in a crusher, and proposes to crush the waste stone on the dumps for road material. In this region there is an immense amount of this waste rock on the old dumps which is available for such purposes. The rock of the Lawson quarry is mainly the blue rather thin-bedded sandstone, part of which has a tendency to weather to a reddish tint, and is separated by partings of shale. In places a good many clay concretions are present, and glacial striæ show on the top of the sandstone layer at the surface, running nearly northeast and southwest. On the south side of the eastern part of the quarry there is a dip of about 6°, 40° north of west. By the barometer the quarry is about 150 feet higher than the railroad station at West Hurley, which makes an approximate altitude of 680 feet A. T.[1]

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[1] Geol. N. Y., Pt. 1, 1843, pp. 318, 319.

[2] Bull. N. Y. State Mus. Nat. Hist., vol. I, No. 3, March 1888, pp. 17–19. The distribution of this belt, location of the quarries, and character of the rock are also fully described (ibid., pp. 71–78). Much of this data is repeated, with some additional information, by Prof. Smock in a later bulletin (ibid., vol. II, No. 10, 1890, pp. 222–225, 265 271), while a considerable part of the information was first published in the "Report on the Building Stones of the United States," Tenth Census of the U. S., vol. X, pp. 130–134.

[3] Bull. N. Y. State Mus. Nat. Hist., No. 3, p. 74.

On the south side of the northeastern part of the quarry is a shaly parting from less than 1 to more than 2 feet in thickness, between layers of heavy sandstone. This shale in places contains *Psilophyton princeps* Dn. in abundance. Fossil plants occur in the massive sandstone and in the large excavation south and southwest of the one with the shale, but still, east of the highway is a sandstone stratum in which some of the best Hamilton fossil plants that I have ever seen were collected. Some of these specimens have been examined by Sir William Dawson and Prof. D. P. Penhallow, and their observations in connection with my own will be given.

From Lawson's quarry at West Hurley several good specimens of *Lepidodendron gaspianum* Dn. were obtained, one of which Sir William Dawson has seen and identified as above. The upper branches of one of the larger specimens show a few leaves along their sides. Some of the decorticated upper branches show clearly the elliptical depressed areoles, not contiguous, in some of which indications of a central scar, sometimes elongated, are preserved. These characters agree closely with Dr. Dawson's specific description where it was stated, — "Decorticated specimens, slightly compressed, show elliptical depressed areoles, not contiguous, and with only traces of the vascular scars."[2] The bibliography and references to range and distribution of this species were recently published,[3] and I will simply quote here the conclusions as to the range and distribution of the species. It is reported "probably from the Corniferous limestone of Ohio; Middle Devonian of Gaspé and New Brunswick; Hamilton, Genesee, Portage, and Chemung (?) of New York; Chemung (?) of Pennsylvania; Upper Devonian of Maine and Gaspé; Pocono possibly of Virginia, and Huntingdon County, Pa.; Subcarboniferous doubtfully of Ohio, and Crawford County, Pa.; possibly in the Lower Devonian of Belgium, and Devonian of France."[4] The New York State Museum at Albany contains specimens labeled *Lepidodendron gaspianum* from the Hamilton of Schoharie County, N. Y., Genesee shale of Moravia, N. Y., and a large specimen from the Hamilton stage of Gilboa, Schoharie County, N. Y. The American Museum of Natural History, Central Park, New York, also contains a specimen labeled, "Summit, Schoharie County, N. Y., and probably of Hamilton age.

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[1] The altitude of West Hurley is given as 531 feet in MacFarlane's Am. Geol. Rail. Guide. 2d ed., p. 130. Prof Guyot quoting the records of the Ulster and Delaware Railroad survey, gives 540 feet for West Hurley (Am. Jour. Sci. 3d ser., Vol. XIX, p. 449): while in a guidebook on the Catskill Mountain issued by the Ulster and Delaware Railroad, in 1890, it is given as 540 feet on p. 31, and as 530 feet on p. 56, but Van Loan's Catskill Mountain Guide, 1890, p. 75, gives the elevation as 530 feet

[2] Quart. Jour. Geol. Soc., Vol. XVIII, 1862, p. 313; in describing fig. 26, of Pl. XIV.

[3] Prosser; Trans. N. Y. Acad. Sci., Vol. XI, 1892, pp. 144-147.

[4] Op. cit., p. 147.

In addition to the above species, Sir William identified one specimen as *Lepidodendron primævum* Rogers, "the Knorria form."

Lepidodendron primærum was figured and named by Prof. H. D. Rogers in the Geology of Pennsylvania,[1] from the Cadent series [Hamilton] at the mouth of Standing [Stone] Creek, east of Huntingdon, Pa. Lesquereux[2] reported the age of the specimen as Marcellus, while Prof. I. C. White gave the horizon of the rocks at the mouth of this creek as Genesee;[3] finally Rogers' figure is reproduced by Prof. Lesley in his final report under the head of "Hamilton sandstone fossils."[4] There are, however, paleontological reasons for considering the age of these rocks as of the Upper Hamilton stage rather than the Marcellus or Genesee.

Dawson[5] reported "a *Lepidodendron*, obscurely preserved, but apparently of the type of *L. Veltheimianum*, and possibly the same with *L. primærum* of Rogers," from the Upper Devonian (supposed Genesee shale) of Kettle Point, on Lake Huron, Ontario, Canada.

Dawson[6] states that there are fragments of a *Lepidodendron*, which seem to belong to this species, in the Portage of Milo, Yates County, N. Y.

Dr. J. M. Clarke[7] reports this species from the *Styliola* layer of Ontario County, N. Y., and at Black Point, Canandaigua Lake, Ontario County, N. Y., both in the Genesee shale. Also from the Naples (Portage) at Naples, Ontario County, (the remarkable specimen now in the New York State Museum at Albany having been obtained from Grime's Gully near Naples); and from the township of Sparta, Livingston County.[8] The occurrence of this species in the Genesee and Portage of Ontario County, is again mentioned by Dr. Clarke,[9] who states that Dr. Dawson identified the specimens from the *Styliola* layer.[10]

Dr. Clarke[11] published a letter giving a general description of the Naples specimen, in which he said "if it had been found in fragments, taken from different spots, it would furnish all the necessary material for a half dozen distinct species of *lepidodendron*, according to prevalent methods of determining these values. Moreover, toward the base, the leaves are uniformly arranged on elevated longitudinal ridges, as in *Sigillaria*, showing nothing of the quincunx arrangement, apparent higher up, and regarded as a diagnostic character of *lepidodendron*. In this region, also, the longitudinal ridges are interrupted by a series of varices, suggestive of an equisetaceous mode of growth." This specimen was found by Mr. D. D. Luther and sold to the New

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[1] Vol. II, Pt. II, 1858, pp. 828, 829, fig. 675 on p. 828.

[2] 2d Geol. Surv. Penn., P. 1880, p. 377.

[3] Ibid., T ^{3}, 1885, p. 261; and see the map of the vicinity of Huntingdon on p. 256.

[4] Ibid., Sum. Desc. Geol. Penn., Vol. II, 1892, p. 1284.

[5] Am. Jour. Science, 3d Ser., Vol. I, 1871, p. 258.

[6] Quart. Jour. Geol. Soc., Vol. XXXVII, 1881, p. 302.

[7] Bull. U. S. Geol. Surv., No. 16, 1885, pp. 25, 26, 33.

[8] Op. cit., pp. 63, 64.

[9] Rept. State Geol. [New York] for 1884, 1885, pp. 18, 19, 21.

[10] Op. cit., p. 18, f. n.

[11] Science, Vol. IX, May 27, 1887, p. 516.

York State Museum at Albany. It is a magnificent specimen, showing the large base with roots and gradually tapering stem of a tree of considerable size, and certainly deserves careful study, with illustration and description.[1]

The range and distribution of the species may be stated as follows: Hamilton of Huntingdon, Huntingdon County, Pa.; the Genesee of Canandaigua Lake, New York, and possibly in the same formation on Lake Huron, Ontario; in the Portage at Naples, Ontario County, and Sparta, Livingston County, N. Y.; also probably in the same formation at Milo, Yates County, N. Y.

Lepidophloios antiquus Dn. was described and figured in Foss. Plants, Dev. and Up. Sil. Formations, Canada, 1871, p. 36, Pl. VIII, figs. 90, 91, from the Middle Devonian of Gaspé. Also see the statement that "Leaves, apparently of a very small species of Lepidophloios are found rarely in the shales of St. John. They may possibly belong to the present species." The West Hurley specimen was identified by Sir William Dawson, and as far as I know, it is the first identification of this species in the United States.

Psilophyton princeps Dn. occurs in considerable abundance. The bibliography, distribution, and range of this species may be found in a recent publication.[2]

It was stated that *Psilophyton princeps* Dn. "is most abundant in the Lower and Middle Devonian, but also ranges from the Upper Silurian to the Upper Devonian of Gaspé, occurs in the Upper Devonian of eastern New York (doubtful Catskill) and is reported from the Subcarboniferous (Waverly) of Ohio."[3]

In the Lawson quarry are a great many specimens which, though resembling *Psilophyton princeps* Dn. in some respects, differ in others, and may be simply fern stipes. Some of the specimens, however, are clearly this species, as is shown by comparing them with specimens from Canada, labeled, and sent me by Sir William Dawson, or with specimens from Haines Falls, Green County, which, upon being submitted to Sir William Dawson, were identified as *Psilophyton princeps* Dn.[4] On one slab from this quarry are a considerable number of approximately parallel stipes, which are nearly flat and show very little structure. The branching is opposite, a few of the branches are about 1¼ inches (3 cm.) in length, but most of them are not more than one-half inch in length where they are broken off. On the stipe which arises from the rhizoma the first branch is 1½ cm. from the rhizoma; then the distance between the first and second and the second and third branches is about $5\frac{1}{2}$ cm.; and between the third and fourth and the fourth and fifth is $4\frac{3}{4}$ cm. The stipes near the base are 2 mm. in width. The upper part of some of the stipes, where the coaly material is not completely gone, shows the leaf scars and also the longitudinal ridges. At the bottom of the slab is a piece of the rhizoma to which one of the stipes is attached. On the upper and longer side, it is 4 cm. in length, and the width is 6 mm. On the rhizoma a little below the origin of the stipe is a circular marking which may be an areole. This is the best specimen of *Psilophyton princeps* Dn. yet seen from the Hamilton of New York. Dr. Dawson stated in the specific description that the stems were "covered with interrupted ridges,"[1] and this character is very clearly shown on specimens sent me by Dr. Dawson from the Lower Devonian of Campbellton, New Brunswick; but on most of the New York specimens this character is not very distinct and some of the stipes are nearly smooth. However, some of the specimens from the Lawson quarry are clearly ridged, though not quite so strongly as the Canadian specimen. A number of these specimens resemble quite closely the plant figured by Vanuxem[2] from west of North New Berlin (now New Berlin), Chenango County, and consequently in the upper part of the Hamilton stage, which was published by Prof. Hall as *P. princeps*.[3]

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[1] For a brief notice see Dr. Clarke in Bull. U. S. Geol. Surv., No. 16, 1885, pp. 63, 64.

[2] Prosser: Trans. N. Y. Acad. Sci., vol. XI, 1892, pp. 139-142. The locality of Cascade Falls was in doubt when the above paper was written, but there are specimens in the State Museum at Albany, labeled "Rhizomes of Psilophyton, Cascade Falls, Ithaca, N. Y.," which, if not the specimens identified by Dr. Dawson, probably came from that locality. The geologic age of these specimens is therefore probably the Ithaca group.

[3] Op. cit., p. 142.

[4] *Am. Geol.*, vol. VII, 1891, p. 365.

In the State Museum at Albany is a specimen labeled Hamilton, North New Berlin, N. Y., which may be one of those collected by Vanuxem. The specimen has a rather large stem, with one branch from which a number of small branchlets arise. This specimen is very similar to, though somewhat smaller than, those collected by myself at Skunnemunk Mountain, Orange County, West Hurley, Ulster County, and Haines Falls, Greene County, N. Y. In the collection of the American Museum of Natural History, Central Park, New York, is a large branched stem labeled "*Psilophyton princeps* Dn. Schoharie County, N. Y."

In addition to the species already mentioned, specimens of a large and interesting fossil plant were obtained, which on study proved difficult of identification. Sir William Dawson, upon examination of these specimens, decided that they had not been described. Prof. Penhallow also regarded them as new, and named and described the species as *Psilophyton grandis*.[4]

No. 1487 D.—Garry ledge. These quarries are 2 miles north of West Hurley with exposures in places of 12 feet of bluestone, part of which is flagging, covered with nearly 15 feet of reddish and greenish argillaceous shales, some of which are arenaceous. In the shale are fossil plants, probably *Psilophyton*, but they are not clearly preserved. The large excavation shows a dip of nearly 3°, 35° east of north; but the joint gives a greater dip west of north.

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[1] Foss. Pl. Dev. and Up. Sil., Pt. I, p. 37.

[2] Geol. N. Y., Pt. III, p. 161, fig. 40.

[3] Sixteenth Regents' Rept. on State Cab. Nat. Hist., 1863, p. 110. Vanuxem's figure is reproduced on p. 111, fig. 2.

[4] Proc. U. S. National Museum, vol. XVI, pp. 111–113, Pl. XII, fig. 12a; Pl. XIII, fig. 12b; Pl. XIV, fig. 12c.

No. 1487 C4.—Formerly Lewis and Goodwin, now Lockwood quarry. This quarry is a few rods south of the railroad, 1¾ miles west of West Hurley, or 1¼ miles east of Olive Branch. The sandstone is the bluestone, with very few fossils. The bottom of the quarry is a little lower than the railroad track at this point.

NO. 1487 C1.—OLIVE BRANCH.

There is a small quarry north of the railroad station, on the right-hand road just beyond the church, which is composed mostly of thin-bedded blue sandstone, with a few shaly partings which contain clay pebbles and specimens of *Psilophyton;* also large plant stems and fragments of fossil wood. This quarry is 18 or 20 feet above the railroad station, which has an altitude of 511 feet. A little farther east by the sawmill and fork in the road is a larger quarry of the blue sandstone (No. 1487 C2). Nothing but plant stems and fragments of fossil wood were found in this quarry. One-fourth mile farther east is an outcrop of red shale by the roadside (No. 1487 C3).

NO. 1488 B3.—OLIVE CITY (POST-OFFICE, OLIVE BRIDGE).

Along Esopus Creek below the bridge are several quarries that have been worked to some extent in a bluish flagging stone, which in places has a slightly grayish tint. The quarry stone is capped by an olive shale. A fragment of a *Lepidodendron* and plant stems were observed in the most southern of these quarries, but with this exception very few fossils were found. In the creek below the quarries are slabs of blue sandstone with beautiful ripple marks, while above the falls and bridge, mottled red and green shales occur. These quarries are near the top of the series of "bluestone" and 30 or 40 feet lower than the railroad station at Brodhead's bridge, which is 500 feet A. T.

Bessemer's quarry, near the foot of High Point Mountain (1488 B5), is 2½ miles from Olive City. The stone is a massive, bluish-gray, rather coarse-grained sandstone, which weathers partly to a reddish tint and partly to a darker gray. Clay pebbles occur in some of the layers, and a few fragments of plants were seen. On the road leading up the foot of the mountain to the quarry are reddish shales, and near the base of the mountain, blocks of stone with cross bedding, very similar to the stone farther up the railroad near West Shokan.

NO. 1488 B2—BRODHEAD'S BRIDGE.

In the bed of Esopus Creek just below the railroad bridge is bluish-gray massive sandstone, below which is first, a mottled chocolate and olive argillaceous shale, then a clear olive argillaceous shale, and at the bottom a gray sandstone like the upper sandstone.

No. 1488 C1—SHOKAN.

Exposure in brook, just below the post-office in Shokan village, of bluish-gray sandstone, with reddish shales a little farther up the brook. Ripple marks are common on the surface of the sandstones, and in addition are rather odd markings vertical to the bedding. The railroad station at West Shokan, across Esopus Creek, is 533 feet, and the altitude of this exposure is not much less than the railroad level.

No. 1488 D1.—A ledge near the south margin of Little Mountain, 2 miles from West Shokan, and well toward its summit. The ledge is a coarse-grained massive sandstone, about 790 feet above railroad level at West Shokan, which makes its elevation approximately 1,323 feet A. T. The summit of Little Mountain by barometer is 825 feet above railroad level at West Shokan, or, approximately, 1,358 feet A. T.

Burgher's quarry, No. 1488 D2, on the southern side of Little Mountain, is about 715 feet above railroad level at West Shokan, or, approximately, 1,248 feet A. T. The rock is a bluish-gray coarse-grained sandstone, which is rather massive, although some flags have been taken out. There is a shaly layer which in places is a blue argillaceous shale, containing plant stems, while fragments of fossil plants occur occasionally in the massive sandstone.

No. 1488 A1.—Quarry 2½ miles up the Ulster and Delaware Railroad from West Shokan and 1 mile up the mountain to the west. Bluish-gray rather coarse-grained sandstone, with shaly layers which contain abundant poorly preserved plant stems. The quarry is 565 feet above the railroad track at the switch.

No. 1489 B1.—BOICEVILLE.

The Avery quarry is three-fourths of a mile north of Boiceville and one-fourth mile up the hill west of the railroad. It is a massive, bluish-gray sandstone with arenaceous shales, in which are numerous poorly preserved plant stems. One fairly well preserved fragment of *Lepidodendron* was also found. Boiceville is 615 feet A. T., and this quarry is approximately 850 A. T.

Cushley quarry, No. 1489 B3, is on the south side of Cold Brook Mountain. The stone is principally a massive, bluish-gray sandstone. There are also layers of pinkish stone, which make a good thin flagging, and near the middle of the ledge is a shaly layer with some clay pebbles. The stone has a rather greenish matrix which weathers to a brown. There is a dip of between 5° and 6° between west and northwest. On the outcrop of one of the old quarries, a little farther north, an occasional white quartz pebble, with the clay pebbles, was seen. These quarries also have plenty of red shale and reddish sandstone. The altitude of this quarry is approximately 1,350 feet A. T.

No. 1489 A1.—MOUNT PLEASANT.

In a railroad cut three-fourths of a mile south of Mount Pleasant is a good exposure of chocolate-colored shales and sandstones. The shales are very argillaceous and contain the fucoid (?) markings so generally seen in the red shales of the Catskill region. The olive to greenish-gray coarse-grained sandstone also occurs in close connection with the red sandstone, as on the eastern side of the track at the south end and under the red. This may be regarded as a good exposure of the "Oneonta" reds. At one point in the cut is a dip of between 3° and 4°, about 15° west of north, while at the southern end the dip is 3°, 5° east of north, showing a small anticline in this cut. Mount Pleasant is 3 miles north of Boiceville, with an altitude of 700 feet, and the cut has an approximate altitude of 685 feet A. T.

No. 1489 A2.—The Nelson Lane quarry is immediately above the southern end of the railroad cut just described. The stone is the dark, bluish gray sandstone, which is in layers of a foot or more in thickness, except in the upper part of the quarry, where there are layers of stone 3 inches in thickness that make good flagging. The exposure is 25 feet in thickness, the massive sandstone strata being separated by shaly layers, in which are clay pebbles; and in one of them, near the middle of the ledge, are numerous clay pebbles in association with an occasional white quartz pebble. Pieces of fossil wood and plant fragments are quite common, and one piece of *Lepidodendron* with clear markings was found. The greatest dip is toward the northwest, and the quarry is about 115 feet above the railroad, or with an approximate altitude of 800 feet A. T. There is a great deal of cross bedding in this ledge, similar to that figured by Vanuxem for the Catskill.[1] By the quarry road leading down the hillside, and a little lower than this quarry, is another opening in a similar sandstone, below which occurs the red shale and sandstone.

PHOENICIA.

No. 1490.—On the western side of the railroad, from Boiceville to 1 mile north of Phœnicia, there is no break in the mountains, and at Phœnicia, where the Stony Clove Creek enters Esopus Creek from the northeast, the two valleys are very narrow with steep mountain slopes on either side. This region forms a charming summer resort and is much frequented. Near Phœnicia on the sides of the steep mountain slopes are numerous ledges of grayish sandstone in which a number of quarries have been opened, and at present Phœnicia is one of the most important shipping points for flagging stone on the line of the Ulster and Delaware Railroad.

No. 1490 A1.—The Baldwin quarry is on Mount Romer, one-half mile southwest of Phœnicia. The stone is mainly a bluish gray sandstone which weathers to a gray and becomes harder. Interstratified with the quarry stone are layers of red shale and sandstone. The red blocky shales contain large numbers of the fucoid (?) so common in the red shales of the Oneonta and Catskill stages. There is also a "pudding-stone" layer composed of different materials, clay pebbles with some quartz pebbles, and the whole mass is firmly solidified. In a blue argillaceous shale plant stems were found, also three rather imperfect fronds of *Archæopteris.* This quarry is barometrically 240 feet above the railroad station at Phœnicia, which is 798 feet A. T., so the quarry is approximately 1,038 feet A. T.

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[1] Geol. N. Y., Pt. III, fig. 53, p. 187.

No. 1490 A2 is a ledge, not worked at present, farther up Mount Romer and above the Baldwin quarry. The floor of the quarry is a pinkish sandstone, above which is the bluish gray, coarse-grained sandstone. There are also the usual irregular shaly layers, in some of which are fragments of ferns. This quarry is 440 feet above the railroad barometrically, or with an approximate altitude of 1,238 feet A. T.

Farther northwest, near the top of Mount Romer, about three-fourths of a mile nearly west of the railroad station, is the McGraw quarry (1490 C2), owned by Mr. John L. McGrath, of Phœnicia. This quarry is 500 feet above the railroad by the barometric reading, or with an approximate altitude of 1,298 feet A. T. The stone is mostly a bluish gray sandstone with an occasional pink tint, and is separated by shaly partings. Near the southern end of the quarry fragments of *Archæopteris* in bluish rather arenaceous shales were found

No. 1490 B1.—The Boice quarry is on Tremper Mountain, 1¼ miles southeast of Phœnicia. The stone is bluish gray, which weathers to a pure gray, and the layers thicken and thin out very irregularly. There is reddish shale and blue which weathers to an olive, argillaceous shale, in which are fossil plants; a few specimens of *Archæopteris* having been obtained. The quarry is between 150 and 160 feet above the railroad, or with an approximate altitude of 950 feet A. T.

No. 1490 B2.—Winnie and Wolvern's quarry is farther up the mountain than the Boice quarry. It is composed largely of the bluish gray sandstone; but in the lower part of the upper half is a layer of bluish argillaceous shale which is very smooth and contains no fossil plants. Large quartz pebbles were seen in nearly clear sandstone. This quarry is about 430 feet above the railroad, by the barometer, or with an approximate altitude of 1,230 feet A. T.

No. 1490 B3.—Winnie and Murphy's quarry is still farther up the mountain, being some 700 feet above the railroad, or with an approximate altitude of 1,500 feet A. T., and is 1¼ miles southeast of Phœnicia. The stone is mainly the bluish gray sandstone, rather thin-bedded, though there is some of the pink sandstone. There is a little argillaceous shale, which is very generally called "pencil" by the quarrymen. No fossils were found.

No. 1490 D1.—The McGrath or "old gold mine" quarry is the southern one on the western side of Mount Sheridan, 1 mile northwest of Phœnicia, and is now worked by Mr. John D. McGrath. The back of the quarry in places is nearly 60 feet high, and a large amount of stone has been taken out. The good stone is the pinkish and bluish gray sandstone, but on the dump is a large amount of the bluish shale, which weathers to an olive color. In some of the rather arenacious slabs were excellent specimens of *Archæopteris obtusa* Lx., in fact the best that have been found at any locality in the Oneonta or Catskill rocks. Sir William Dawson has expressed much interest in the photograph of one of the large specimens which is figured in this work (See Pl. II, figs. *b*, *c*). In the more argillaceous shales were found a few pinnules of *Archæopteris sphenophyllifolia* Lx. (?). The quarry is about 370 feet above the railroad, or with an approximate altitude of 1,170 feet A. T.

Farther north, along the same ledge, is the Ryder quarry (1490 D2), with bluish-gray and pink sandstone. This quarry contains a rather prominent stratum of the "flint rock" of the quarrymen, which is the "pudding stone" that in this quarry contains a good many quartz pebbles in addition to those of clay. A little of this stratum was seen in the McGrath quarry, but the Ryder quarry does not show the plant-bearing stratum.

NO. 1493 A1.—ALLABEN.

Risley quarry, which is not worked at present, is one-fourth of a mile southeast of Allaben, on the western side of the railroad. The lower part is massive bluish gray sandstone and the top red shale, containing plenty of fucoid (?) markings. The altitude of Allaben is 990 feet, which is about that of the quarry.

NO. 1492 A1.—BIG INDIAN.

This quarry is near the summit of the hill, one-half mile north of the railroad station. The bed rock is a pink sandstone, above which is the bluish gray sandstone, a layer of the pebble rock, and some bluish shale. Specimens of *Archæopteris* are found in the shale. The quarry, which is not worked at present, is about the last one on the Ulster and Delaware Railroad until after passing the summit and approaching Griffin's Corners. The quarry is 550 feet above the railroad, which is 1,209 feet A. T. at Big Indian, making the altitude of the quarry approximately 1,760 feet.

Five miles beyond Big Indian and 41 miles from Rondout is the Grand Hotel station, where the summit of the railroad is reached at 1,886 feet A. T. The ascent of the hill back of the Grand Hotel is made over strata of coarse gray sandstone, alternating with red sandstone and shale. The field on the summit, which is about 565 feet above the railroad station, or, approximately, 2,450 feet A. T., is apparently underlain by red shale and sandstone, but the rather prominent ledge on the western side of the hill is composed of the coarse gray, fine-bedded sandstone. These exposures from Phœnicia to the summit are characteristic deposits of the Catskill stage of southeastern New York.

SECTIONS IN CATSKILL MOUNTAINS, GREENE COUNTY, N. Y.

When the summit of the Ulster and Delaware Railroad was reached at the Grand Hotel station, where the rocks are well up in the Catskill stage, I returned to Phœnicia and followed the line of the Stony Clove and Catskill Mountain and Kaaterskill railroads to Kaaterskill station, which is less than 1 mile from the eastern face of the Catskill Mountains at the Catskill Mountain House, above Palenville.

About Lanesville, 5 miles from Phœnicia, are a number of small quarries, but none are worked to any extent. The Barber quarry, No. 1058 P1 on the land of Lane and Barber, about 1 mile southwest of Lanesville, contains at the base bluish-gray sandstones, then a layer of blue shale which has some clay pebbles; above this, thin-bedded sandstones, and on top the pink sandstone. There are masses of plant stems on some of the shaly rock, and many of the sandstones contain branching fern stipes, but no pinnules are preserved.

Lanesville railroad station is approximately 1,350 feet A. T., estimating by the reading of barometer from Phœnicia, and this quarry is some 350 feet higher, or about 1,700 feet A. T.

Toward the foot of the hill, not far from Mr. Lane's "cold spring," is an old quarry (1058 P3) of reddish sandstone. Some of the reddish, arenaceous shales contain fragments of *Archæopteris*, but no good specimens were found. In this quarry, or the small excavation in the bluish-gray sandstone and shale by the "cold spring," Mr. Gilbert van Ingen secured quite good specimens of *Archæopteris.*

Across the valley, northwest of Lanesville station, is a quarry (1058 Q1) composed of bluish-gray sandstone and blue shale. In the shale are plant stems and fragments of *Lepidodendron.*

Farther up the side of the mountain, on Mr. Barber's farm, is another small quarry (1058 Q2) about 300 feet above railroad level, or, approximately, 1,650 feet A. T. The stone is the pink sandstone, alternating with red shale. On part of the sandstone slabs in the upper portion of the quarry are the best specimens of the fucoid (?) markings of these red rocks that have been found. One of the best of these specimens is now in the U. S. National Museum at Washington. This shows a plant of comparatively large size, with base of stem, large stipe, and numerous branches. This specimen is regarded as belonging to *Haliserites*, by one paleobotanist, while it resembles in some characters specimens of *Chondrites* as *C. lanceolatus* Ldwg.,[1] or compare *Palæophycus gracilis* Ldwg.,[2] which in branching and general appearance is quite similar to this specimen, but the base is entirely different from the Lanesville specimen since it has a broad root with several stalks rising from it. Nathorst has figured and described somewhat similar markings as the trails of worms.[1]

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[1] Paleontographica, Vol. XVII, No. 3, 1869, Pl. xix, fig. 6, p. 112.

[2] *Ibid., Pl. 18, fig. 6,* p. 111.

No. 1058 R1.—The North quarry, 1½ miles up the Hollow Tree Branch, north of Lanesville, is on the western side of the creek, and shows mainly pink sandstone with a little red shale and gray sandstone on top. No fossils were found, and the quarry is some 300 feet above the railroad, or, approximately, 1,650 feet A. T. About 150 feet higher on the mountain side is another small quarry of pink sandstone with a little bluish shale.

No. 1494 A1.—Simpson quarry, just above Edgewood, is mainly the pink sandstone. This quarry is 3 miles northeast of Lanesville, about 470 feet higher, or with an approximate elevation of 1,820 feet. In the bed of Stony Clove Creek, just above Edgewood railroad station, is a fine exposure of the red shale.

No. 1494 B.—In the "notch" on the eastern side of the railroad, about one-fourth of a mile south of the Stony Clove station, is the Eldredge quarry. In the upper part is very dark bluish-gray sandstone, and in the lower, the pink sandstone. The sandstone is coarse grained, very compact, and contains no fossils. Loose blocks of conglomerate with quartz pebbles are present. This quarry is on the western side of Plateau Mountain, and nearly 130 feet higher than the Stony Clove switch, which is 2,071 feet A. T.,[2] making the approximate altitude of the quarry 2,200 feet A. T.

NO. 1495 A.—HAINES FALLS, GREENE COUNTY.

In Twilight Park, near the foot of Round Top Mountain, on the western side of Kaaterskill Creek and Haines Falls, is a prominent ledge of conglomerate (1495 A2). Some of the pebbles are very large and the stratum forms a conspicuous feature of the mountain side, being called locally the "pudding stone." This massive conglomerate is well up in the Catskill stage, and is lithologically about the same as the conglomerate noted by Mather on South Mountain, between Hotel Kaaterskill and the Catskill Mountain House,[3] which he referred to the "lower grits of the Coal formation," evidently regarding them as above the Catskill division. This ledge is by the barometer 110 feet above Haines Falls which, according to Guyot, are 1,890 feet, A. T.,[4] making its elevation approximately 2,000 feet A. T.

In the creek, under the bridge above the Haines Falls (1495 A1), are red sandstones. Below, at the brink of the falls and in the side of the cliff, is the bluish-gray sandstone, reaching down to about the middle of the falls, where there is a stratum of red shale and sandstone, then bluish-gray sandstone, and at the bottom of the falls another stratum of the red shale and sandstone. The bed of the creek at the foot of Haines Falls is about 125 feet below the beginning of the stairway at the top of the ledge above. The upper part of the first cascade below Haines Falls is composed of gray sandstone, in one stratum of which are quite large pebbles, and red argillaceous shale, below which at the base is mainly red sandstone. Below this is another cascade, with gray sandstone at the top and red shales and sandstones at the bottom.

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[1] See Om några förm. Växtfoss., Pl. 18, fig. 11, 12, in Öfversigt af Kongl. Vetenskaps-Akad. Forh., Stockholm, 1873.

[2] Van Loan's Catskill Mountain Guide, 1890, p. 78. Guyot seems to have been in error in assigning this locality an elevation of 1,700 feet. (Am. Jour. Sci., 3d ser., Vol. XIX, p. 435).

[3] Geol. N. Y., Pt. I, 1843, p. 303.

[4] *Am. Jour.* Sci., 3d. ser., Vol. XIX, p. 449.

At the bottom of the series of cascades is a stratum of red shale, above which is a bluish shale, weathering to an olive color, which passes into the coarse gray sandstone as we reach the top. In the lower part of the shale the structure is rather irregular, perhaps slightly concretionary, and fossil plants were found. This stratum (No. 1495 A—1) is in place at about the middle of the ladder on the lowest ledge, under the massive sandstone, while a little farther down the path are loose blocks which have fallen down the bank, thus affording an excellent opportunity to hunt for fossils. The stratum is about 275 feet below the top of Haines Falls, or it has an approximate altitude of 1,615 feet A. T. The majority of the fossil plants in this stratum belong to *Psilophyton princeps Dn.*, specimens of which were submitted to Sir William Dawson, who agreed to the above identification.[1]

It is difficult to locate the position of this stratum in Sherwood's measured section of the Kaaterskill Clove and Round Top Mountain;[2] but if his section began near the Palenville Hotel and Prof. Guyot's altitudes be correct,[3] then it would seem to be near the 29-foot bed of coarse gray sandstone, No. 121 of his section,[4] the bottom of which is 922 feet above the base of Sherwood's section. This horizon, according to Ashburner's interpretation of the series, is well up in what he calls the "red beds" of No. IX, or the Catskill stage. Ashburner regarded the upper 1,412 feet of this section, forming the upper part of Round Top Mountain, as belonging to No. X of the Pennsylvania Survey,[5] the Pocono or Vespertine, while Prof. Hall regarded 800 or 900 feet of the upper part of Round Top as of Vespertine age.[6] At this time Prof. Hall described a geological section from Schenevus, Otsego County, across the Catskill Mountains to Glasco, Ulster County, and gave the thickness of the different formations as follows: "The lower beds shown, of Portage and Chemung, have a thickness of more than 2,000 feet; while the red rocks above, which may be referred to the Catskill, are about 3,000 feet thick, and the higher beds, of Vespertine, extending to the summit of Round Top, may be reckoned at about 800 feet."[1]

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[1] See the following note from Sir William in reference to these plants: "So far as I can make out, most of the plants are *Psilophyton princeps*. One seems to have sporocarps attached, and the broader stems are, I suppose, rhizomata." (Am. Geol., Vol. VII, p. 365, f. n. §.)

[2] Proc. Am. Phil. Soc., Vol. XVII, 1878, pp. 346, 347. In connection with this section see Ashburner's interpretation in 2d Geol. Surv. Penn., F, 1878, pp, 218, 219; and Prof. Hall's account in the 28th Rep. N. Y. State Mus. Nat. Hist., 1879, pp. 14, 15.

[3] 680 feet for the Palenville Hotel and 1,890 feet for Haines Falls (Am. Jour. Sci., 3d Ser., Vol. XIX, p. 449), which would make the altitude of the plant bed (1495 A — 1) about 935 feet above the level of the Palenville Hotel.

[4] Proc. Am. Phil. Soc., Vol. XVII, 1878, p. 346.

[5] Second Geol. Surv. Penn., F, pp. 218, 219.

[6] Proc. Am. Assoc. Adv. Sci., Vol. XXIV, B, 1876, p. 83, and 28th An. Rep. N. Y. State Mus. Nat. Hist., 1879, p. 15.

The ledge in front of the Catskill Mountain House, overlooking the Hudson, is the coarse gray sandstone of the Catskill stage, as stated in 1843 by Mather.[2] Mr. N. H. Darton has published a section "west of Palenville," on which the lower dark shales are called "Hamilton group," with the "Oneonta beds" immediately above, on which rests the "Catskill group."[3]

In the text it is stated that the Chemung "becomes harder and coarser eastward, and was traced to and along the eastern front of the Catskill Mountains, its base defining the upper limit of the Oneonta formation. Its thickness averages about 250 feet. It is overlain by a red shale bed 25 to 30 feet in thickness, and this, in turn, is overlain by the thick mass of hard gray sandstone on which the old Mountain House is built. At a point about 4 miles due west of Durham, some molluscan remains were found in a softer gray bed about 175 feet above the summit of the Oneonta formation. One fairly distinct individual was recognized by Dr. Hall as *Spirifer disjuncta*, a Chemung form."[4]

Near the summit of the path from the Mountain House to the Hotel Kaaterskill, over South Mountain, is a ledge of very coarse conglomerate, which is similar to the one in Twilight Park on Round Top. However, it is some 375 feet higher, considering the ledge in front of the Mountain House 2,225 feet A. T.[5] On the road toward the Hotel Kaaterskill, after the path enters it, is a small ledge composed in the center of a conglomerate layer, with gray sandstone above and below. Toward the hotel the conglomerate thickens rapidly, making an excellent locality for noting the rapid change in the thickness of a conglomerate. The strata on South Mountain are nearly horizontal, but in places there is very strong cross-bedding. Guyot clearly described the structure of the Catskill Mountains as follows: "We have not to look in the chains of the Catskill for a series of anticlinal and synclinal folds or arches, as in ordinary mountain chains. Throughout the region the strata of which they are composed are nearly horizontal from the bottom of the valleys to their top, or have a dip rarely exceeding 4° or 5°. The same is true of the plateaus."[6]

On the bank of the Kaaterskill Creek below Etna Cottage, east of

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[1] Proc. Am. Assoc. Adv. Sci., Vol. XXIV, B, pp. 82, 83. For additional particulars see 28th An. Rep. N. Y. State Mus. Nat. Hist., pp. 14, 15.

[2] Geol. N. Y., Pt. I, p. 303.

[3] Am. Jour. Sci., 3d Ser., Vol. XLV, p. 205, section D of fig. 2.

[4] Op. cit., p. 207.

[5] Guyot, Am. Jour. Sci., 3d Ser., Vol. XIX, p. 449; and this conglomerate ledge is barometrically 150 feet higher.

[6] *Ibid.*, p, 433.

Palenville, are red arenaceous shales (1497 A1), which contain the fucoid (?) markings of the Catskill red shales.

A short distance from this exposure, and to the north of the cottage and Drummond Falls House, in a branch of the Kaaterskill, are Drummond Falls. The cliff toward the house is composed of red shale, which breaks up into very fine fragments, with a little mottled shale in the lower part. The brink of the falls and upper part of the ledge to the north are composed of gray sandstone and shales. The foot of Drummond Falls is about 125 feet lower than the Palenville railroad station which makes its altitude approximately 389 feet A. T.[1]

No. 1497 B1—The Hugh Smith quarry is on the road from Saxon post-office to the great Falls of the Kaaterskill, and about one-half mile from them. The quarry is in the Hamilton "blue stone" belt, similar to the stone near West Hurley, and is composed principally of blue flagging stone with some shale stripping on top. The Great Falls of the Kaaterskill [2] (1497 B2) are below the covered bridge and post-office, about 4 miles east of Palenville. The brink of the falls is formed by a prominent sandstone stratum, between 3 and 4 feet in thickness, and at the bottom of the falls is another similar layer. Above the falls, in the coarse arenaceous part of the prominent sandstone stratum are fossil shells, such as are usually found in similar zones of the Hamilton. There is quite a decided dip between west and northwest.

FAUNA OF NO. 1497 B2.[3]

Spirifera mucronata (Con.) Bill	(a)
Spirifera granulifera Hall	(c)
Spirifera medialis Hall (?)	(r)
Strophodonta perplana (Con. (?)	(rr)
Grammysia bisulcata (Con.) Hall (?)	(rr)

Below the brink of the falls, and along the sides of the gorge are argillaceous blue shales (1497 B3), splitting up finely, which contain many fossils characteristic of the argillaceous Hamilton shales. The falls are about 40 feet in height.

FAUNA OF NO. 1497 B3.

Chonetes coronata (Con.) Hall	(c)
Spirifera mucronata (Con.) Bill	(rr)
Nyassa arguta Hall	(rr)
Nucula corbuliformis Hall	(rr)
Paracyclas lirata (Con.) Hall	(rr)
Nuculites oblongatus Con	(rr)
Loxonema delphicola Hall	(rr)
Lingula sp	(rr)

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[1] Altitude of Palenville railroad station, according to a letter from C. A. Beach, superintendent Catskill Mountain Railroad, is 514 feet.

[2] This part of the creek is frequently spelled Cauterskill.

[3] Prof. William M. Davis reported at the Big Falls "*Spirifer accuminata* and *mucronata*, *Grammysia bisulcata*, and others" (Appalachia, Vol. III, June 1882, p. 29), and later said that "*Spirifer mucronata* and *medialis* are both of common occurrence" at this locality (Bull. Mus. Com. Zoöl., Geol. Ser., Vol. I, No. X, January, 1883, p. 318).

CONCLUSIONS.

This study of the Devonian system in eastern Pennsylvania and New York offers an opportunity to compare the different series of rocks composing the system in that region with those of the more typical sections in central and western New York. A comparatively small amount of investigation has latterly been given to the rocks of this system in eastern New York, while their continuation in eastern and central Pennsylvania has received much attention. On this account it seems better at present to discuss more particularly the conclusions of the Pennsylvania survey. In reference to the work of the Pennsylvania geological survey it is but just to state that the complicated geologic structure of the State has been worked out in an admirable manner and the stratigraphic position of the various formations accurately determined, so that the State has reason to be proud of its most excellent geological atlas. But with the exception of the fossil plants of the carboniferous, the paleontology of the State has never received the attention it deserves. This failure to give paleontology its due consideration is evident in the correlations of the local formations of the Paleozoic rocks of the State with the typical sections of these formations in New York. If the writer be able to correlate more accurately a part of the Devonian system of Pennsylvania with rocks of the same age in New York, he realizes that it is because he has had the advantage of a thorough field study of these formations at their classic localities, supplemented by careful laboratory study of their fossils. The study of the New York sections and fossils was under the guidance of Dr. Henry S. Williams, then at Cornell University, who has added so much to our accurate knowledge of the Devonian system of the United States, and to whom the writer is greatly indebted for methods and suggestions in working out this problem.

The Marcellus shale at the base of the Middle Devonian is generally clearly defined, except in the upper part, where it changes rather gradually from the argillaceous to the more arenaceous shales of the overlying Hamilton stage. The presence of fossils usually indicates the stage to which the shales belong, although in one or two localities species generally regarded as restricted to the Marcellus were found associated with those of the Hamilton. Prof. Lesley has called attention to this gradual transition from the black Marcellus to the overlying Hamilton shales, and says "it is evident that the distinction between *Marcellus* and *Hamilton* formations is a purely arbitrary one, the Marcellus deposits being continued into the *Hamilton* age; no reason but their darker color justifying their name; as the deposit became coarser its color growing lighter, chiefly, in all probability, because fine or mud clay has the faculty of absorbing and retaining petroleum better than coarser or more sandy clay."[1] Still there seems as good reason for retaining the Marcellus stage as that of many other formations, for it is very often the case that the transition from one formation to another will not be sharply defined lithologically in some part of its area.

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[1] Sum. Desc., Geol. Penn., Vol. II, f. n., pp. 1204, 1205.

The Hamilton stage as mapped and defined in Pennsylvania consists principally of rather coarse arenaceous shales and thin sandstones;[1] but to these deposits should be added the calcareo-arenaceous zone above, called Tully limestone, and the still higher, black, fossiliferous shales, called the Genesee. It has been shown in this paper that the so-called Tully and Genesee stages of Pennsylvania do not agree with the New York formations either in lithologic or paleontologic character. After the disappearance of the Tully limestone and Genesee black shale in central New York, there is very little evidence of the reappearance of either in eastern New York and Pennsylvania. Since this opinion is the reverse of that held by the Pennsylvania geologists, a brief review of the data offered in support of their correlation is in order.

Prof. White reports that "the top of the Hamilton is marked off everywhere in this district by the appearance of a dark, sandy fossil slate or shale, which seems to be identical with the Genesee black slate of the New York Reports. * * * It is also quite fossiliferous, containing *Spirifer mucronatus*, *Athyris spiriferoides*, *Microdon bellistriata*, *Tropidoleptus carinatus*, and many other forms."[2]

As might be inferred by one familiar with the Genesee outcrops of New York, the so-called Genesee of Pennsylvania does not closely resemble the typical Genesee shales in lithologic character, but, on the other hand, it conspicuously resembles the Moscow zone at the top of the Hamilton stage. As far as the paleontology is concerned, it has already been shown (p. 41) that these species are not characteristic of the Genesee, and in fact as far as my observation has extended they have never been found in undisputed Genesee shale, but are characteristic of the argillaceous shales in the Upper Hamilton. Furthermore, the difficulty of this correlation can not be removed by the supposition that the above fossils were incorrectly identified, for the writer

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[1] Prof. Lesley, in his chapter on the "Hamilton sandstone and shale," proposes the following classification for the Hamilton of Pennsylvania:

Hamilton......	Upper......	*Moscow shales.* *Encrinal limestone.*
	Middle	*Ludlow sandstone.*
	Lower........	*Skeneateles shale.*

In the explanation of this plan the professor says: "Why should not the original New York names, *Moscow*, *Skeneateles*, be revived? But if so, the original New York name for the middle division, viz. *Ludlowville*, would naturally accompany them or be adopted in the simpler form of *Ludlow*, especially as Prof. Hall justified its adoption by reference to its coincidence in time and fossils with the famous *Ludlow* formation of England." (Sum. Desc. Geol. Penn., Vol. II, p. 1237.) It is true that when Prof. Hall wrote his final report on the Fourth Geological District of New York in 1843 he compared the Ludlowville shales with the Ludlow rocks of England, but that was before the line separating the Devonian from the Upper Silurian had been determined with approximate precision, and such correlation was abandoned many years ago, for, as is well known, the Ludlow rocks of England form the upper group of the Upper Silurian, instead of belonging, with the Hamilton, to the Middle Devonian.

[2] G^6, pp. 107, 108.

has collected them in the same shales, in association with other characteristic Hamilton species.[1]

The Tully limestone horizon was described as follows by Prof. White: "A great coral bed is found directly under the Genesee shale at many localities in the district, corals, shells, and crinoids being often so abundant as to constitute it an impure limestone." The following species were reported: "*Zaphrentis Rafinesquii*, *Z. gigantea*, *Heliophyllum Halli*, together with several species of *Syringopora*, and other forms that I could not determine." Again: "There can be little doubt that this stratum represents the Tully limestone horizon of the New York Reports, and it thus becomes a valuable guide in correlating and classifying the rocks of the district."[2] It has already been pointed out that this zone does not lithologically resemble the Tully limestone of central New York, while none of the fossils mentioned by Prof. White are considered Tully species.[3]

In the prefatory letter to Prof. White's report of the following year, Prof. Lesley stated, "The presence of the Tully limestone, beneath the Genesee slates, in this part of Pennsylvania [central] is demonstrated."[4]

As far as reported by Prof. White, the evidence in favor of this demonstration is as follows: In the account of the Devonian rocks of this district, the Tully limestone is described in the section on Little Fishing Creek, Columbia County, as "a series of dull gray and bluish gray impure limestones, weathering with a buffish tint, and often presenting a slaty appearance; usually quite fossiliferous, the following species being frequently present: *Ambocœlia umbonata*, *Spirifera ziczac*, *S. fimbriata*, *Orthis vanuxemi*, *Atrypa reticularis*, *Chonetes setigerus*, *Phacops rana*, *Dalmanites calliteles*, *Platyceras*, sp ?, thickness 50 feet."[5]

Of the above list of fossils, five[6] of them occur in the Tully limestone of New York; but none of the characteristic Tully species were reported, the above, as stated by Prof. White, being common Hamilton fossils.

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[1] The above remarks in reference to the so-called Genesee of eastern Pennsylvania are not intended to apply to the horizon termed the Genesee group by Prof. Claypole in Perry County, in southern central Pennsylvania. The correlations of Prof. Claypole considered carefully the paleontology of the formations, and are the most accurate of the Pennsylvania survey. His description of the formation as "black, almost unfossiliferous shale," agrees more closely with the New York shales, and the *Styliola fissurella* Hall (F ^{2}, p. 69), which he reports is a common Genesee fossil, although it occurs in the Marcellus, Hamilton, Portage, and Ithaca stages.

[2] G ^{6}, pp. 109, 110.

[3] See list of Tully species by Dr. H. S. Williams, in Bull. Geol. Soc. Am., Vol. I, pp. 490, 491. Neither do they appear in the list of Tully fossils by Prof. S. G. Williams in Sixth Ann. Rept. State Geol. [New York], 1887, p. 26. This list included some species usually regarded as not belonging to the Tully limestone, and for comment on this point see Bull. Geol. Soc., Vol. I, pp. 496, 497, and f. n. on p. 496.

[4] G ^{7}, p. VI.

[5] Ibid., p. 75. The specific identification of this list is supposed to be by Prof. Claypole, and on p. 289 the same species are reported as identified by Prof. Claypole, with the exception of *Orthis vanuxemi* and *Dalmanites calliteles*, from the section along the Susquehanna River between Catawissa and Bloomsburg ferry, Columbia County. The Fishing Creek section is again mentioned by Prof. White, who says, "The Tully limestone, No. 15, has the same ashen-gray cast with a tinge of buff on its weathered surface, and dark-blue color within, as everywhere else in the district. It is also fossiliferous here, and in it were seen *Phacops rana*, *Dalmanites calliteles*, *Ambocœlia umbonata*, and others not determined" (pp. 228, 229).

[6] *Ambocœlia umbonata*, *Spirifera fimbriata*, *Atrypa reticularis*, *Phacops rana*, and *Dalmanites calliteles*. (See list of important Tully species by Dr. H. S. Williams, in Bul. Geol. Soc. Am., Vol. I, p. 490).

In reference to the correlation of this horizon with the New York Tully, the professor said: "The Tully limestone is identified in this region only by its appearance; its fossils, as may be seen from the list above given [the one quoted above], are of the common Hamilton forms. It may be merely the upper portion of the Hamilton; but as the beds immediately above it are certainly the representatives of the New York Genesee, there can be no impropriety in referring the limestone to the Tully horizon."[1]

Recently Prof. White wrote me as follows: "With reference to the identification of the Tully limestone in G^7, it was entirely on the strength of the stratigraphic order, and not upon the fossils as then stated, so that it may well be a portion of the Hamilton."[2]

The exposures referred to the Tully limestone in central Pennsylvania have not been examined by the writer; but since they contain fossils that occur in the typical Tully limestone, are capped by shales which are nearly unfossiliferous (not by shales containing an abundant fauna of the Upper Hamilton, as in Monroe and Pike counties), it is possible that this horizon represents the Tully limestone of New York, and in this case, the horizon is not the same stratigraphically as the so-called Tully limestone of Monroe and Pike counties.

Prof. Lesley has considered particularly the Tully limestone in his final report, and it is important to review his opinion in reference to the Pennsylvania zone referred to this formation. He says: "In eastern New York, the Tully is wanting. From the Chenango River eastward a hundred miles, to the valley of the Hudson, at Catskill, no Tully limestone outcrop can be found between the Genesee and Hamilton formations; it was not deposited in this part of the sea; nor has it been seen in southern New York as far as the Delaware River; but its outcrop begins again in Pike county on the eastern point of Pennsylvania and extends westward to the Lehigh River, a distance of 60 miles."[3] A sketch map is given showing what is called the "Northern outcrop of the Tully" across central New York, and the "Southern outcrop of Tully limestone" across central and eastern Pennsylvania between the Susquehanna and Delaware Rivers.[4] It is further stated that between the north and the west branches of the Susquehanna River "the formation is at its thickest (60 feet), and its lithologic character the same as in New York. But, on the other hand, all its fossils are of Hamilton type, not a single peculiar New York Tully species having been as yet observed in it. On the Delaware it is nowhere more than 30 feet thick, retains its character, but holds no special Tully shells. The importance of these facts in their bearing upon our views of Paleozoic deposition can hardly be exaggerated. There is no mistake about the formation; it is everywhere the same kind of sediment, immediately succeeding the bluish sandy shale deposits of Hamilton age; immediately preceding the black mud deposits of Genesee age; laid down under the same conditions, filled generally with the same kind of animal remains, and apparently restricted to an area of great size indeed, but in reference to the whole Paleozoic water basin strictly local * * * while its two or three special or characteristic shells lived only in the northern part of its area."[1]

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[1] Ibid., p. 76.

[2] Letter of Prof. White, January 19, 1892.

[3] Sum. Desc. Geol. Penn., Vol. II, p. 1313.

[4] Ibid., p. 1314.

Finally, Prof. Lesley, commenting upon Prof. Claypole's general section of Perry County, in which 30 feet of very fossiliferous shales at the top of the Hamilton were not referred to the Tully limestone, says: "If then this zone does not represent the Tully, or Cuboides zone of Williams, what does it represent? I can not see that the absence of *Atrypa cuboides* (*Rhynchonella venustula*) from this perfectly well marked horizon on the Delaware, Susquehanna, and Juniata Rivers in Pennsylvania is of the slightest value, except to a paleontologist who cares little or nothing for rock sections. In fact, I can not but regard this as a flagrant instance of the superiority of stratigraphy over paleontology in any broad study of our formations."[2]

In the account of the different sections of this region, it has been shown that the lithologic character of the so-called Tully limestone of eastern Pennsylvania is not the same as the New York formation; its fossils are not Tully species, and it is not capped by the Genesee black shale; but on the other hand by argillaceous shales containing abundant fossils characteristic of the Upper Hamilton. If a correlation of this zone with one of central and western New York were attempted, I would suggest the encrinal limestone separating the fossiliferous, argillaceous Ludlowville and Moscow shales. As the Pennsylvania horizon may be represented by any one of the several coral horizons in the Hamilton of New York, or by an entirely different zone, such a correlation of this zone is very hazardous without careful comparison of the species and stratigraphy.

Finally, if any notice be taken of the evident bias against paleontology, it might be said that this furnishes an excellent example of the superiority of the combination of stratigraphy and paleontology over that of stratigraphy and lithology "in any broad study of our formations."

At first Prof. White regarded the Portage stage as unrepresented in eastern Pennsylvania, and said: "It was found impossible to identify any of the beds between the base of the Catskill and the top of the Hamilton with the Portage series of other portions of Pennsylvania, either on lithological or paleontological grounds, and hence I have applied the name Chemung to the entire interval, preferring to regard the Portage series as absent from this district. In this view of the matter I am influenced by several considerations, the chief of which are:

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[1] Loc. cit., p. 1315.

[2] Ibid., p. 1322.

"First. The occurrence of characteristic Chemung fossils throughout the entire interval.

"Second. The total absence, so far as my observation has extended, of all the characteristic Portage fossils, not even a single Fucoid having been seen.

"Third. The Chemung character of the rocks considered lithologically, there being a total absence of those interstratified, hard, blue sandstones, which distinguish the Portage from the Chemung."[1]

While in the following report on central Pennsylvania is the statement, "I have found it impracticable to separate the Portage from the Chemung by any well-defined characters that would apply throughout the district; although it is very probable that 800 to 1,000 feet of the beds in the lower part of the group are the equivalents of the Portage beds in New York."[2] In a recent letter Prof. White states that he wishes the above statement to apply to Monroe and Pike Counties, and that the lower part of the formation called Chemung in those counties corresponds to the Portage of New York.[3] The professor says: "I would let the Chemung epoch end with the appearance of the first red bed, and confine the Portage to the basal, sparingly fossiliferous, flaggy beds, which I find 1,000 to 1,500 feet thick above what I have in Pennsylvania, termed the Genesee."[4]

Prof. Claypole described rocks containing *Cardiola speciosa* (now *Glyptocardia*) in Perry County, which are apparently quite similar to the portage of central and western New York;[5] while Prof. Lesley says, "On the Delaware River, in Pike, Monroe, and Carbon counties, as well as eastward toward the Hudson, and around the eastern and northern foot slope of the Catskill Mountains, in New York, the Portage formation can not be recognized as distinct from the overlying Chemung. In nearly 2,000 feet of strata from the Genesee black slate upward, no characteristic Portage fossil has been seen. Not a single seaweed has been found. All the shells are of Chemung type. There is a total absence of those hard, blue sandstones which distinguish the Portage in New York."[6]

From the preceding part of this paper we learn that the fossils of this formation are not characteristic Chemung species; but that they constitute a modified Hamilton fauna, similar to the faunas that occur in central and eastern New York below the Oneonta sandstone. after the Tully limestone and Genesee shale have disappeared.

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[1] G^6, 1882, p. 104.

[2] G^7, 1883, p. 63. In the descriptions of the section along the North Branch Railroad, near Rupert (p. 70), and the Fishing Creek (p. 228), in Columbia County, it is stated that Portage rocks may be present.

[3] Letter of February 22, 1892.

[4] Letter of January 19, 1892.

[5] F^2, 1885, p. 69.

[6] Sum. Desc. Geol. Penn., Vol. II, 1892, pp. 1364, 1365.

In reference to this correlation it is interesting to state that one of the New York geologists looked over the Spragueville collection, called it "high Hamilton" and said that it did not represent the Chemung at all. It might be added that collections from the so-called Tully, Genesee, and Chemung have been shown different New York geologists, not one of whom agrees with the correlation of the Pennsylvania survey.

The correlation of the "Chemung" of eastern Pennsylvania with the New York formation presents a more difficult problem than that of the "Genesee and Tully limestone," but I would call it Lower Portage. This subject has been considered quite fully in a recent paper, and some of the data in favor of such correlation may be found in that article.[1]

The Starucca sandstone was at first regarded as the base of the Catskill,[2] but in the following report it was considered as probably Upper Chemung.[3]

Finally, Prof. White writes: "My own opinion is that we should separate the Chemung and Catskill at the horizon of the lowest red beds, for these seem to come in at about the same general zone everywhere, and it is the only possible means of separation, for if we only rely upon fossils alone we can follow them up through the series until they leave us no Catskill at all, when we know absolutely we have 1,000 to 2,000 feet of them at these very localities."[4]

Any geologist who has followed this series of rocks from central New York eastward to the Catskills, and then along their eastern slope into Pennsylvania, knows very well that the red beds appear at different horizons in various parts of the area, and also realizes the utter impossibility of indicating the same approximate horizon by drawing a line through the lowest red beds.[5]

The Starucca sandstone is still left by Prof. Lesley as the base of the Catskill.[6]

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[1] Prosser, Am. Jour. Science, 3d ser., Vol. XLVI, pp. 212-230.

[2] Prof. White, G^6, p. 102, where it is stated: "In Wayne and Susquehanna counties the Catskill series is terminated below by a bed of greenish-gray sandy shales in which are often interstratified thin beds of sandstone which rarely become massive. From its occurrence near Starucca it was called the Starucca shale."

[3] The professor said, "It seems probable that the 600 feet of grayish-green beds at the top of the Chemung in Pike and Monroe, which in G^6 were referred to the Catskill, under the name of Starucca beds, may be the equivalent of a portion of the Upper Chemung of this district, and therefore erroneously referred to the Catskill in G^6 (G^7, p. 73).

[4] Letter of February 22, 1892.

[5] The most recent expression of this fact is by Mr. N. H. Darton, who says: "The lowest red beds have often been used as a criterion of discrimination between Chemung and Catskill, but they vary in stratigraphic position from the upper beds of the Hamilton, in eastern New York, to near the base of the Lower Carboniferous, in northwestern Pennsylvania, a difference in horizon of several thousand feet." (Am. Jour. Sci. 3d ser. Vol. XLV, p. 208).

[6] See Sum. Desc. Geol. Penn., Vol. II., 1892, pp. 1576, 1585, 1597.

The problem of the separation of the Chemung and Catskill was presented in an admirable manner by Prof. Stevenson, in his address before Section E of the American Association for the Advancement of Science, at its Washington meeting.[1] The Delaware River section was considered, and the professor proposed to draw the line separating the Chemung from the Catskill, between the Montrose red shale and the Montrose sandstone,[2] and he says, "A remarkable feature of the Chemung is the nonfossiliferous area of southeastern New York and the adjacent portion of Pennsylvania."[3] Furthermore, "The area in which the lifeless portion of the column reaches much below the horizon of the Lackawaxen conglomerate embraces parts of Carbon, Monroe, Pike, and Wayne Counties, of Pennsylvania, and Sullivan, Delaware, and Greene Counties, of New York, contains rather more than 4,000 square miles, while the whole area under consideration is more than 30,000 square miles. To explain the absence of life is not easy; it can not be due merely to an agent which caused the redness or greenness of the beds, for in Huntingdon and Fulton Counties, of Pennsylvania, the Montrose shales have many fossiliferous beds, though having also many green and red beds. Besides, the Delaware section shows a great thickness of beds of other colors, which are equally without animal remains."[4]

The writer did not find sufficient evidence to justify an attempt to indicate any sharp line between the Portage and Chemung and Chemung and Catskill stages of this region. In the Delaware flags *Orthonota* (?) *parvula* Hall was found, while still higher, near the transition from the Montrose shales to the Honesdale sandstones, *Spirifera mesastrialis* Hall and *Leda diversa* Hall (?) occur. The fossils seem to indicate that these rocks are not younger than the Lower Chemung; and in fact the geologist who has latterly given the Chemung-Catskill problem the most careful study remarked, on seeing the specimens, "This fauna is not as high as the Chemung, which would be characterized by *Spirifera disjuncta* Sow." It will be noticed that this interpretation of the section agrees more nearly with the correlation of Prof. Stevenson than with that indicated by the other Pennsylvania geologists for eastern Pennsylvania. It is probable that, beginning with the greenish shales and sandstones of the Starucca and the New Milford red shales, there is a series of deposits equivalent to the Oneonta sandstone of New York, which, as is well known, gradually passes into beds of typical Middle and Upper Portage in central New York.

The correlation of the Devonian system of eastern Pennsylvania, as indicated above, may be shown in the following table:

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[1] "The Chemung and Catskill (Upper Devonian) on the eastern side of the Appalachian Basin," Proc. Am. Asso. Adv. Sci., vol. 40. 1892, p. 219. See an additional paper by Prof. Stevenson, in Am. Jour. Sci., 3d ser., Vol. XLVI, p. 330.

[2] Loc. cit., p. 227.

[3] Loc. cit., p. 240.

[4] Loc. cit., p. 241.

Table showing the geologic position and character of the formations composing the Devonian system of eastern Pennsylvania.

Lower Carboniferous.	Pocono.		Mount Pleasant conglomerate	About 50 feet[1] in thickness.	
Upper Devonian.	Catskill.		Mount Pleasant red shale	Red shale interstratified with greenish-gray sandstones; 300 feet in thickness.	
			Elk Mountain sandstone and shales.	Greenish sandstones and shales; 200 feet (?).	2,000 feet.
			Cherry Ridge group	Red arenaceous shale at base with two massive conglomerate layers at top separated by shale; 325 feet (?).	
			Honesdale sandstones	Somewhat pebbly sandstones, with some shaly, reddish sandstone.	
	Chemung.	Portage (including Oneonta) and Chemung (of Prosser).	Montrose shales	Mainly red shale, but some greenish argillaceous shale. In upper part highest fossils, *Spirifera mesastrialis* Hall.	
			Delaware flags	Greenish gray thin sandstones and shales with some red shale. *Orthonota* (?) *parvula* Hall in lower part; 1,200 feet.	
			New Milford shale	Red shale; 100 feet.	
			Starucca sandstone	Greenish gray massive sandstones; 600 feet.	
			Chemung (of White) (*Paracyclas lirata* stage (?) of lower Portage, Prosser).	Olive and gray micaceous sandstones, with thin arenaceous shales, moderately fossiliferous; 1,150 feet (?).	
Middle Devonian.	Hamilton.		Genesee shale. } Wanting. Tully limestone. }		
			Genesee shale (of White); Tully limestone (of White); Hamilton (of White). } Hamilton of Prosser.	The lower part consists of thin sandstones and arenaceous shales; next is a somewhat calcareous zone, and at the top argillaceous, fossiliferous shales; 1,400 feet.	
			Marcellus shales	The lower shales are grayish, becoming very dark in the upper part; 800 feet (?).	
Lower Devonian.	Corniferous.		Upper Helderberg (Corniferous limestone).	Cherty limestone; 200 feet.	
			Cauda-galli grit	Sandstones and arenaceous slates; 250 feet.	

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[1] The thickness of the formations given in this table is in the main the same as that given by Prof. White in G⁶ (see p. 76, etc.).

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DEPARTMENT OF THE INTERIOR

BULLETIN

OF THE

UNITED STATES

GEOLOGICAL SURVEY

No. 121

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

UNITED STATES GEOLOGICAL SURVEY
J. W. POWELL, DIRECTOR

A BIBLIOGRAPHY OF NORTH AMERICAN PALEONTOLOGY

1888-1892

BY

CHARLES ROLLIN KEYES

WASHINGTON
GOVERNMENT PRINTING OFFICE
1894

LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
U. S. GEOLOGICAL SURVEY,
DIVISION OF GEOLOGY AND PALEONTOLOGY,
Washington, D. C., April 27, 1894.

SIR: I have the honor to transmit herewith a bibliography of North American paleontology for the years 1888-1892, inclusive, by Charles R. Keyes, with the recommendation that it be published as a bulletin of the Survey.

I am, with respect, your obedient servant,

CHAS. D. WALCOTT,
Geologist in Charge.

Hon. JOHN W. POWELL,
Director U. S. Geological Survey.

BIBLIOGRAPHY OF NORTH AMERICAN PALEONTOLOGY, 1888-1892.

By Charles Rollin Keyes.

INTRODUCTION.

The present bibliography is a record of North American paleontology for the years 1888 to 1892, inclusive. It is essentially a dictionary-catalogue of publications relating to the subject, which were issued in the lustrum mentioned. It may be regarded, therefore, as a condensed review of the paleontologic literature appearing during the period.

In arrangement, the references are primarily adapted to the convenience of the working paleontologist and geologist. There are embraced:

(1) An author's list, in which is given the full title and the volume, pages, and illustrations of the book or serial in which each article appeared, also the date and place of publication. This is followed by a brief synopsis of the contents of each paper, an enumeration of the new genera and species described, and a list of forms already known, which are described and figured anew.

(2) A title index, in which the name of each article appears under each of its leading words. Then comes the name of the author and an abridged reference to the place of appearance.

(3) Subject entries and cross references. These are biologic, geologic, and geographic. The first is divided into the great zoologic groups, under each of which appears all the published papers which refer to the particular sections. The names of the authors and abridged references to place and time of publication are given in all cases. Whenever additional information is wanted, as to the species described or the specific contents, reference may be readily made to the name of the author. Under the second, all papers treating of the larger geologic groups are classed together and the references given as before. In the third the different papers referring to the various States and Territories are brought together in a similar way. Whenever deemed necessary brief explanations are added. A full list of subjects is appended.

One of the principal advantages in the present scheme is that in no case is it necessary to turn back from title to title in order to obtain a full bibliographic reference. A worker upon any systematic group of animals, a particular geologic age, or a given area finds all the articles upon the subject brought together.

In the consideration of the bibliographic matter the literature of the subject may be classed under three categories: (*a*) That which is strictly paleontologic in its character, (*b*) that which is incidental to geologic work, (*c*) that which is largely secondary, forming important announcements of discoveries or partaking of the character of criticisms, notices, or reviews of work already done. References belonging to these three classes of literature have in the present connection received very different treatment, according to the importance of their bearing upon paleontology.

During the preparation of the Bibliography the works in the subjoined list were consulted. In addition circular letters were addressed to all the leading American workers who were known to have published articles relating to paleontology, in order that fuller justice might be done in each case. Most of these letters received cordial replies; in the case of a few answers were greatly delayed, while several were probably forgotten altogether.

For aid and suggestions in the preparation of this work sincere thanks are tendered Mr. Charles D. Walcott, chief of the Division of Invertebrate Paleontology; also to Mr. H. F. Bain, of the Iowa Geological Survey, for valuable assistance.

LIST OF SUBJECTS.

- Biologic:
  - Protozoans.
  - Corals.
  - Hydroids.
  - Polyzoans.
  - Echinoderms.
  - Brachiopods.
  - Lamellibranchs.
  - Gasteropods.
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- Geologic:
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  - Cambrian.
  - Silurian.
  - Devonian.
  - Carboniferous.
  - Jurassic.
  - Triassic.
  - Eocene.
  - Neocene.
  - Pleistocene.
- Geographic:
  - America (general).
  - Canada (general).
  - All States and Territories of the United States and Canada.

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Call, R. Ellsworth. New Post-Pleiocene Linnæid. (American Geologist, Vol. I, pp 146–148. Minneapolis, 1888.) *Pompholopsis whitei* described and figured as new from California.

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Calvin, S. Collection of Fossils from Lower Magnesian Limestone from Northeastern Iowa. (American Geologist, Vol. X, pp. 144–148. Minneapolis, 1892.) Notes on various species, with descriptions, without figures:

Metoptoma alta Whitfield.
Straparollus claytonensis sp. nov.
Straparollus pristiniformis sp. nov.
Raphistoma pepinense Meek.
Raphistoma multivolvatum sp. nov.
Raphistoma paucivolvatum sp. nov.
Holopea turgida Hall.
Murchisonia sp. ?
Orthoceras primigenium Vanuxem.
Cyrtoceras luthei sp. nov.

Calvin, S. Collection of Fossils from Lower Magnesian Limestone from Northeastern Iowa. (Bul. Lab. Nat. Hist. State Univ. Iowa, Vol. I, No. 2, pp. 189–193. Iowa City, 1892.) The following species described:

Metoptoma alta Whitfield.
Straparollus claytonensis sp. nov.
Straparollus pristiniformis, sp. nov.
Raphistoma multivolvatum sp. nov.
Raphistoma pepinense Meek.
Raphistoma paucivolvatum sp. nov.
Holopea turgida Hall.
Murchisonia sp ?
Orthoceras primigenium Vanuxem.
Cyrtoceras luthei sp. nov.

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Calvin, S. Difference between Acervularia profunda, Hall, and Acervularia Davidsoni, Edwards and Haime. (Proc. Iowa Acad. Sci., 1890–1891, pp. 30–32. Des Moines, 1892.) The specific differences of the two forms are minutely described.

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Calvin, S. Fossils Collected in Northwest Territory, Canada, by Naturalists from the University of Iowa. (Bul. Lab. Nat. Hist. State Univ. Iowa, Vol. II, pp. 163–165. Iowa City, 1892.) *Pentamerus decussatus* Whiteaves, described and figured, with notes on various other species.

Calvin, S. Geological problems in Muscatine County, Iowa. (Bul. Lab. Nat. Hist. State Univ. Iowa., Vol. I, No. 1, pp. 7–18. Iowa City, 1888.) Incidental references to Devonian and Kinderhook forms.

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Calvin, S. New Genus and New Species of Tubicolar Annelida. (American Geologist, Vol. I, pp. 24–28. Minneapolis, 1888.) *Streptindytes acervulariæ* is described, without figures, as new.

Calvin, S. Specimen of Conularia Missouriensis, Swallow, with Crenulated Costæ. (American Geologist, Vol. V, pp. 207–208. Minneapolis, 1890.) Variety *C. hermani* described as new.

Calvin, S. Synonymy, Characters, and Distribution of Spirifera Parryana, Hall. (Bull. Lab. Nat. Hist. State Univ. Iowa, Vol. I, No. 2, pp. 19–28. Iowa City, 1888.) A full account of the structural features of the species and the names which have been applied to it.

Calvin, S. Two unique Spirifers from the Devonian Strata of Iowa. (Bul. Lab. Nat. Hist. State Univ. Iowa, Vol. II, pp. 165–167. Iowa City, 1892.) *Spirifera urbana* Calvin and *Spirifera macbridei* Calvin, redescribed and figured.

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Comparisons of Principal Forms of Dinosauria of Europe and America. O. C. Marsh. (Rep. British As. Adv. Sci., 1888, 660. 1889.)

Concho Country, State of Texas, Geological Survey. W. F. Cummins and O. Lerch. (American Geologist, V, 321-323. 1890.) Incidental references to fossils.

Confounding of Nassa Trivittata (Say) and Nassa Peralta (Conrad). G. D. Harris. (American Geologist, VIII, 174-176. 1891.)

Connecticut.

Dinosauria, American. O. C. Marsh. (Am. Jour. Sci., (3), XXXVII, 331-336. 1889.)

Fishes and Fossil Plants of Triassic Rocks of New Jersey and Connecticut Valley. J. S. Newberry. (U. S. Geol. Sur., Mon. XIV, 95 pp. 1888.)

Taconic System of Emmons and use of Name Taconic in Geologic Nomenclature. C. D. Walcott. (Am. Jour. Sci., (3), XXXV, 229-242. 1888.) Incidental references to the fossils.

Connecticut—Continued.

Triassic Dinosauria. O. C. Marsh. (Am. Jour. Sci., (3,) XLIII, 543–546. 1892.)

Triassic Formation of Connecticut, two Belts of Fossiliferous Black Shale. W. M. Davis and S. W. Loper. (Bul. Geol. Soc. America, II, 415–430. 1891.)

Vertebrate Fossils. O. C. Marsh. (Am. Jour. Sci., (3,) XLII, 265–269. 1891.)

Connecticut Valley, Fossil Fishes and Fossil Plants of Triassic Rocks. J. S. Newberry. (U. S. Geol. Sur., Mon. XIV, 95 pp. 1888.)

Connecticut Valley, New Footprints. M. M. Nitiver. (Proc. Am. As. Adv. Sci., XL, 286. 1892.) Abstract.

Conocardium from Devonian. C. R. Keyes. (Proc. Iowa Acad. Sci., I, Pt. II, 23, 24. 1892.)

Conularia Missouriensis, Swallow, with Crenulated Costæ. S. Calvin. (American Geologist, V, 207–208. 1890.)

Cooper, W. F. Tabulated List of Fossils known to occur in the Waverly of Ohio, Compiled. (Bul. Sci., Lab. Dennison Univ., Vol. IV, Pt. I, pp. 123–130. Granville. 1888.) This list gives the known stratigraphic range of the species in Ohio.

Cope, E. D. Adhesive Disk of Echeneis. (American Naturalist, Vol. XXIII, pp. 254, 255. Philadelphia, 1889.) Critical notes on recent work by Storms on *Echeneis glaronensis*.

Cope, E. D. Age of Denver Formation. (Science, Vol. XIII, p. 290. New York, 1889.) Says that the Denver and Willows Creek formations are Laramie. Incidental references to fossils.

Cope, E. D. Age of Staked Plains of Texas. (American Naturalist, Vol. XXVI, p. 49. Philadelphia, 1892.) A brief note.

Cope, E. D. Aneghino on the Extinct Mammalia of Argentina. Review. (American Naturalist, Vol. XXV, pp. 725–727. Philadelphia, 1891.) A critical synopsis.

Cope, E. D. Artiodactyla. (American Naturalist, Vol. XXIII, 111–136 bis, 3 plates. Philadelphia, 1889.) Continuation of paper in same journal in Vol. XXII, pp. 1079–1095.

Cope, E. D. Artiodactyla. (American Naturalist, Vol. XXII, pp. 1079–1095, 2 plates. Philadelphia, 1888.) This is a general discussion of the group and its evolution.

Cope, E. D. Baur's Morphogeny of the Carpus and Tarsus of the Vertebrates. (American Naturalist, Vol. XXII, pp. 435–437. Philadelphia, 1888.) A critical review of the work.

Cope, E. D. Boulenger on Rhynchocephalia, Testudinata, and Crocodila. (American Naturalist, Vol. XXV, pp. 813, 814. Philadelphia, 1891.) A review of a portion of the catalogue of the British Museum.

Cope, E. D. California Cave Bear. (American Naturalist, Vol. XXV, pp. 997–999, 1 plate. Philadelphia, 1891.) A description of *Arctotherium simum* Cope, from the Pleistocene.

Cope, E. D. Catalogue of Fossil Reptilia and Batrachia of the British Museum, Pt. I; by Dr. Lydekker. Review. (American Naturalist, Vol. XXIII, p. 43. Philadelphia, 1889.) Brief notes.

Cope, E. D. Catalogue of Fossil Reptilia and Batrachia in the British Museum, Parts II, III, and IV. Review. (American Naturalist, Vol. XXV. pp. 644–646. Philadelphia, 1891.) A critical review of the work.

Cope. E. D. Cetacea. (American Naturalist, Vol. XXIV, pp. 599–616, 4 plates. Philadelphia, 1890.) A revision of the group with a list of extinct species.

Cope, E. D. Character of Some Paleozoic Fishes. (Proc. U. S. Nat. Mus., Vol. XIV, pp. 447–463, 6 plates. Washington, 1892.) Contains: (1) New Elasmobranch from the Permian; (2) New Ichthyodorulites; (3) Cranial Structure of Macropetalichthys; (4) Pectoral Limb of the Genus Holonema Newberry; (5) Paired fins of Megalidithys mitidus Cope; (6) New Species of Platysomidæ.

Cope, E. D.—Continued.
The following described as new:
Styptobasis.
Styptobasis knightiana.
Hybodus regularis.
Ctenacanthus amblyxiphis.
Platysomus palmaris.
Platysomus lacovianus.
Reviewed in Am. Naturalist, ix, 263, 264, 1892.

Cope, E. D. Contribution to a Knowledge of Fauna of Blanco Beds of Texas. (Proc. Acad. Nat. Sci. Phila., Vol. xliv, pp. 226–230. Philadelphia, 1892.) The following species described as new:
Mastodon successor.
Testudo pertenuis.
Testudo turgida.

Cope, E. D. Contribution to Vertebrate Paleontology of Texas. (Proc. Am. Philos. Soc., Vol. xxx, pp. 123–131. Philadelphia, 1892.) The following species described:
Creceoides osbornii Shufeldt.
Episcoposaurus haplocerus sp. nov.
Equus simplicidens sp. nov.
Microdus dumbelli sp. nov.
Testudo turgida sp. nov.

Cope, E. D. Contribution to Vertebrate Paleontology of Brazil. (Proc. Am. Philos. Soc., Vol. xxiii, pp. 1–21, 1 plate. Philadelphia, 1889.)

Cope, E. D. Cranial Characters of Equus Excelus. (Proc. Am. As. Adv. Sci., Vol. xl, p. 285. Salem, 1892.) Abstract. A discussion of characters of the skull and the relations of the species as indicated by the characters.

Cope, E. D. Credner on Palæohatteria. (American Naturalist, Vol. xxiii, pp. 148, 149, bis. Philadelphia, 1889.) The conclusion is reached that the Palæohatteria is one of the Proganosauria and probably a member of the Stereosternidæ.

Cope, E. D. Crook and Saurodontidæ from Kansas. (American Naturalist, Vol. xxvi, pp. 941, 942. Philadelphia, 1892.) A critical review of "Ueber einige fossile Knochenfische aus der mittleren Kreide von Kansas; von Alja Robinson Crook: Palæontolographica, xxxix, 107, 1892.

Cope, E. D. Degenerate Types of Scapular and Pelvic Arches in the Lacertilia. (Jour. Morph., Vol. vii, pp. 223, 224. Boston, 1892.)

Cope, E. D. Dicotylinæ of John Day Miocene of North America. (Proc. Am. Philos. Sic., vol., xxv, pp. 62–79. Philadelphia, 1888.) The following are the new forms:
Bothrolabis gen. nov.
Bothrolabis rostratus, sp. nov.
Reviewed in Neues Jahrbuch, 322–323. 1890.

Cope, E. D. Dinosauria of the Laramie. (American Naturalist, Vol. xxiii, pp. 904–906. Philadelphia, 1889.) Notes on several species with description of *Pteropelyx grallipes* (gen. et sp. nov.).

Cope, E. D. Edentata of North America. (American Naturalist, Vol. xxiii, pp. 657–664, 2 plates. Philadelphia, 1889.) A general review of the group.

Cope, E. D. Extinct Sirenia. (American Naturalist, Vol. xxiv, pp. 697–702, 2 plates. Philadelphia, 1890.) A review of the group with the expression of the lines of descent.

Cope, E. D. Fishes from South Dakota. (American Naturalist, Vol. xxv, pp. 654–658. Philadelphia, 1891.) The following are described as new:
Gephyrura concentrica.
Sardinius blackburni.
Proballestomus longulus.
Oligoplarchus squamipinnis.
Mioplosus multidentatus.
Reviewed in American Geologist, ix, 57, 1892.

Cope, E. D. Fourth Note on Dinosauria of the Laramie. (Am. Naturalist, Vol. xxvi, pp. 756–758, 1 plate. Philadelphia, 1892.) The following described·
Maraospondylus gigas, gen. et sp. nov.
Claorhynchus trihedrus, gen. et sp. nov.
Agathaumas Cope.
Petropelyx Cope.

Cope, E. D. Glyptodon from Texas. (Am. Naturalist, Vol. xxii, pp. 345, 346. Philadelphia, 1888.) *Glyptodon petaliferus* announced from Texas.

Cope, E. D. Goniopholis in the Jurassic of Colorado. (Am. Naturalist, Vol. XXII, pp. 1106, 1107. Philadelphia, 1888.) *Goniopholis lucasii* described as new.

Cope, E. D. Handbuch der Paleontologie von Zittel. (Am. Naturalist, Vol. XXII, pp. 1018, 1019. Philadelphia, 1888.) A brief review of the work.

Cope, E. D. Homologies of Cranial Arches of the Reptilia. (Am. Naturalist, Vol. XXVI, pp. 407, 408, 1 plate. Philadelphia, 1892.) An analysis of the cranial characters of the genera of Reptilia discovered in the Permian of North America by the author.

Cope, E. D. Homologies of Cranial Arches in the Reptilia. (Trans. Am. Philos. Soc., Vol. XVII, pp. 942–944. Philadelphia, 1892.)

Cope, E. D. Horned Dinosauria of the Laramie. (American Naturalist, Vol. XXIII, pp. 715–717, 1 plate. Philadelphia, 1889.) A short list of species from this formation, with descriptions of the following as new:

Monoclonius recurvicornis.
Monoclonius sphenoceras.

Reviewed in Neues Jahrbuch, 435–486, 1890.

Cope, E. D. Horned Dinosaurian Reptile. (American Naturalist, Vol. XXII, pp. 1108, 1109. Philadelphia, 1889.) A brief account of a Dinosaur found by O. C. Marsh in Montana.

Cope, E. D. Hyena and other Carnivora from Texas. (American Naturalist, Vol. XXVI, pp. 1028, 1029. Philadelphia, 1892.) Notes on the discovery of carnivora in the Pliocene of Texas, with a description, without figures, of *Borophagus diversidens.*

Cope, E. D. Hyena and other Carnivora from Texas. (Proc. Acad. Nat. Sci., Phila., Vol. XLIV, 326, 327. Philadelphia, 1892.) A note describing the following genera and species as new:

Borophagus diversidens.
Canimartes cumminsii.

Cope, E. D. Intermediate Pliocene Fauna. (American Naturalist, Vol. XXIII, pp. 253, 254. Philadelphia, 1889.) A list of interesting species, with notes.

Cope, E. D. In the Texas Panhandle. (American Geologist, Vol. X, pp. 131, 132. Minneapolis, 1892.) Brief notes on collections made.

[Cope, E. D.] Lectures on Geology and Paleontology. (American Naturalist, Vol. XXVI, pp. 940, 941. Philadelphia, 1892.) A brief synopsis of a syllabus of a course of lectures delivered before the University of Pennsylvania.

Cope, E. D. Litopterna. (American Naturalist, Vol. XXV, pp. 685–693. Philadelphia, 1891.)

Cope, E. D. Lydekker's Catalogue of Fossil Mammalia in the British Museum, Part V. (American Naturalist, Vol. XXII, pp. 164–165. Philadelphia, 1889.) A brief synopsis of the work.

Cope, E. D. Marsh on Cretaceous Mammalia. (American Naturalist, Vol. XXIII, pp. 490, 491. Philadelphia, 1889.) A brief review on an article by O. C. Marsh in Am. Jour. Sci. (3), pp. 81 and 177, 1889.

Cope, E. D. Mechanical Causes of Development of Hard Parts of Mammalia. (Journal Morphology, Vol. III, pp. 137–290. Boston, 1889.) Reviewed in Neues Jahrbuch, 389–405 1892.

Cope, E. D. Mechanical Causes of Origin of the Dentition of the Rodentia. (American Naturalist, Vol. XXII, pp. 3–13. Philadelphia, 1888.) Consideration of the peculiarities of the rodent dental system as a result of the mechanical consequences of an increase in the length of the incisor teeth, with notes on the *Marsupialia multituberculata.*

Cope, E. D. Mechanical Origin of Dentition of Amblypoda. (Proc. Am. Philos. Soc., Vol. XXV, pp. 80–89. Philadelphia, 1888.) The action of mechanical forces and their effects on the evolution of the dentition in this group discussed and illustrated.

Cope, E. D. New and Little Known Paleozoic Vertebrates. (Proc. American Philosophical Soc., Vol. XXI, pp. 221–228. Philadelphia, 1892.) The following species described:

Cœcostius macromus.
Ganorhynchus oblongus.
Holonema horrida.
Holoptychius filosus.
Megalichthys macroponus.

Cope, E. D. New Dog from the Loup Fork Miocene. (American Naturalist, Vol. XXIV, pp. 1067, 1068. Philadelphia, 1890.) *Ælurodon compressus* described as new.

Cope, E. D. New Fishes from South Dakota. (American Naturalist, Vol. XXV, pp. 654–658. Philadelphia, 1891.) The following described, without figures, as new:

Gephyrura.
Gephyrura concentrica.
Proballostomus.
Proballostomus longulus.
Oligoplarchus.
Oligoplarchus squamipinnis.
Mioplosus multidentatus.

Cope, E. D. New Form of Marsupialia from the Laramie Formation. (Proc. Am. As. Adv. Sci., Vol. XLI, p. 177. Salem, 1892.) Notice of the new genus Thlæodon.

Cope, E. D. New Horizons of Fossil Fishes. (Am. As. Ad. Sci., Vol. XL, p. 285. Salem, 1892.) Announcement and discussion of the discovery of fish remains at Rose Hill, South Dakota.

Cope, E. D. New Genus of Mammalia from the Laramie Formation. (American Naturalist, Vol. XXVI, pp. 758–762. Philadelphia, 1892.) *Thlæodon padanicus* (gen. et sp. nov.) described without figures.

Cope, E. D. New Genus of Triassic Dinosauria. (American Naturalist, Vol. XXIII, p. 626. Philadelphia, 1889.) The genus Cœlophysis described as new from the Triassic of New Mexico.

Cope, E. D. Non-Actinopterygian Teleostomi. (American Naturalist, Vol. XXV, pp. 479–481. Philadelphia, 1891.) A new arrangement of the group.

Cope, E. D. New Perissodactyls from the White River Neocene of Nebraska. (American Naturalist, Vol. XXV, pp. 47–49. Philadelphia, 1891.) *Nenodus peloceras* and *Cænopus simplicidens* described, without figures, as new.

Cope, E. D. New Species of Mustilidæ from the Loup Fork Miocene of Nebraska. (American Naturalist, Vol. XXIV, pp. 950–952. Philadelphia, 1890.) The following species described, without figures, as new:

Stenogale robusta.
Brachypsalis pachycephalus.

Cope, E. D. Osborn on Mesozoic Mammalia: Jour. Acad. Nat. Sci. Philadelphia, (2), Vol. IX, pp. 186–265, July, 1888. (American Naturalist, Vol. XXII, 723, 724. Philadelphia, 1888.) A careful review of the work.

Cope, E. D. Permanent and Temporary Dentitions of Certain Three-toed Horses. (American Naturalist, Vol. XXVI, pp. 942–944. Philadelphia, 1892.) A study, with figures, of the dentition of these forms.

Cope, E. D. Permanent and Temporary Dentition of Certain Three-toed Horses. (Proc. Acad. Nat. Sci. Phila., Vol. XLIV, pp. 325–326. Philadelphia, 1892.) Brief notes on the subject.

Cope, E. D. Phylogeny of the Horse. (American Naturalist, Vol. XXII, pp. 448–449. Philadelphia, 1888.) A review of "Études sur l'Histoire Paléontologique des Ongules; II, Le Développement des Equidæ; par Marie Parlou, Moscow, 1888.

Cope, E. D. Pineal Eye in Extinct Vertebrates. (American Naturalist, Vol. XXII, pp. 914–917, 1 plate. Philadelphia, 1888.) Probable origin of the organ and its significance in vertebrates.

Cope, E. D. Pohlig on Elephas Antiquus. (American Naturalist, Vol. XXIII, pp. 712–713. Philadelphia, 1889.) A brief review of recent work by Pohlig.

Cope, E. D. Proboscidia. (American Naturalist, Vol. XXIII, pp. 191-211, 8 plates. Philadelphia, 1889.) A general account of the group and its evolution. Reviewed in Neues Jahrbuch, 150-154, 1891.

Cope, E. D. Professor Marsh on Extinct Horses and other Mammals. (American Naturalist, Vol. XXVI, pp. 410-412. Philadelphia, 1892.) A review of articles in Am. Jour. Sci., April and May of 1892.

Cope, E. D. Review of North American Species of Hippotherium. (Proc. Am. Philos. Soc., Vol. XXVI, pp. 429-458, 3 plates. Philadelphia, 1889.)

Cope, E. D. Rütineyer on Classification of Mammalia and on American Types recently found in Switzerland. (American Naturalist, Vol. XXII, pp. 831-835. Philadelphia, 1888.) Review.

Cope, E. D. Schlosser on Carnivora. (American Naturalist, Vol. XXII, pp. 1019, 1020. Philadelphia, 1888.) A brief notice.

Cope, E. D. Scott and Osborn on Fauna of the Brown's Peak Eocene. (American Naturalist, Vol. XXIV, pp. 470-472. Philadelphia, 1890.) Synopsis of a recent paper in the Trans. Am. Philos. Soc., XVI, 461, 1889.

Cope, E. D. Seeley's Researches on Organization, Structure, and Classification of the Fossil Reptilia. (American Naturalist, Vol. XXIV, pp. 271-273. Philadelphia, 1890.) A critical review of recent papers by H. G. Seeley, published in the Philosophical Trans. Roy. Soc., 1887-1889.

Cope, E. D. Silver Lake of Oregon and its Region. (American Naturalist, Vol. XXIII, pp. 970-982. Philadelphia, 1889.) Incidental references to fossil forms.

Cope, E. D. Skull of Dinosaurian, Lælaps Incrassatus, Cope. (Proc. Am. Philos. Soc., Vol. XXX, 240-244. Philadelphia, 1892.)

Cope, E. D. Skull of Equus Excelsus, Leidy, from the Equus beds of Texas. (American Naturalist, Vol. XXV, pp. 912, 913. Philadelphia, 1891.) Characters described.

Cope, E. D. Species of Plioplarchus from Oregon. (American Naturalist, Vol. XXIII, pp. 625, 626. Philadelphia, 1889.) *Plioplarchus septemspinosus* described as new from Miocene of Oregon.

Cope, E. D. Syllabus of Lectures on Geology and Paleontology; III, Paleontology of Vertebrata. (Pamphlet, 90 pp. Philadelphia, 1891.)

Cope, E. D. Synopsis of Families of Vertebrata. (American Naturalist, Vol. XXIII, pp. 849-877. Philadelphia, 1889.) A complete synopsis.

Cope, E. D. Vertebrata from Tertiary and Cretaceous Rocks of the Northwest Territory. (Cont. Canadian Pal., Vol. III, pp. 1-25. Ottawa, 1891.) The species from the Oligocene or lower Miocene beds of the Cypress Hills. The following species are described:

Amia macrospondyla.
Amia whiteavesiana.
Amia macconnelli.
Rhinestes rhæas.
Trionyx leucopotamicus.

Reviewed in Neues Jahrbuch, 394, 395, 1892.

Cope, E. D. Vertebrate Fauna of Equus Beds. (American Naturalist, Vol. XXIII, pp. 160-165. Philadelphia, 1889.) List of species and localities, with descriptions, without figures, of *Alces brevitrabalis* sp. nov., *Alces semipalmatus* sp. nov., and *Casicus ensifer* sp. nov.

Cope, E. D. Vertebrate Fauna of Puerco Epoch. (American Naturalist, Vol. XXII, pp. 161-163. Philadelphia, 1888.) Analysis of the characters of the fauna.

Cope, E. D. Vertebrata from Tertiary and Cretaceous Rocks of Northwest Territory; I, The Species from Oligocene or Lower Miocene Beds of the Cypress Hills. (Geol. Sur. Canada, Vol. III, pp. 1-25, 14 plates. Ottawa, 1891.) Five species of fish, one reptile, and a number of mammals are described, the following as new:

Amia whiteavesana.
Amia macrospondyla.
Rhinestes rhæas.
Amiurus cancellatus.
Amiurus macconnellii.
Trionyx leucopotamicus.

Cope, E. D.—Continued.
Reviewed in Science, XIV, 53, 1891; also Ottawa Naturalist, V, 74–77, 1891; and Am. Geologist, VIII, 326, 1891.

Cope, E. D. Vertebrata of Swift Current River, II. (American Naturalist, Vol. XXIII, pp. 151–155 *bis*. Philadelphia, 1889.) Description of some material collected by the Canadian Geological Survey. The following species are described:

Haplacodon augustigensis nov. gen.
Anchiterium westoni sp. nov.
Hypertragulus tranversus sp. nov.
Leptomeryx esulcatus sp. nov.
Leptomeryx mammifer.
Leptomeryx semicinctus sp. nov.

Cope, E. D. Vertebrata of Swift Current River, III. (American Naturalist, Vol. XXIII, pp. 628, 629. Philadelphia, 1889.) The following species described as new from the Neocene of Canada:

Menodus selwynianus.
Menodus syceras.
Elotherium coarctatum.

C[ope,] E. D. Woodward's Fossil Fishes. (American Naturalist, Vol. XXV, pp. 646, 647. Philadelphia, 1891.) A critical synopsis.

Corals.

Acervularia Profunda, Hall, and Acervularia Davidsoni, Edwards and Haime, Differences. S. Calvin. (American Geologist, IX, 355–358. 1892.)

Acervularia Profunda, Hall, and Acervularia Davidsoni, Edwards and Haime, Differences. S. Calvin. (Proc. Iowa Acad. Sci., Vol. I, Pt. II, 30–32. 1892.)

Age of Cincinnati Anticlinal. A. F. Foerste. (American Geologist, VII, 97–109. 1891.) Incidental references to fossils.

Archæocyathus, Billings, and other Genera allied to or associated with it from the Cambrian Strata of North America, Spain, Sardinia, and Scotland. G. J. Hinde. (Quart. Jour. Geol. Soc., London, XLV, 125–148. 1889.)

Calciferous Formation in Champlain Valley. E. Brainard and H. M. Seely. (Bul. Geol. Soc. America, I, 501–516. 1890.) Incidental references to fossils.

Cambrian Fossils in Neocene Gravels of Islands of Martha's Vineyard. J. B. Woodworth. (American Geologist, IX, 243–247. 1892.)

Cambrian, Lower, or Olenellus Zone in North America, Descriptive Notes of New Genera and Species. C. D. Walcott. (Proc. U. S. Nat. Mus., XII, 33–46. 1890.)

Cell Development in the Favositidæ. C. E. Beecher. (Trans. Connecticut Acad. Arts and Sciences, XIII, Pt. II, 215–219. 1892.)

Chætetes, Typical, in Devonian Strata at the Falls of Ohio and Likewise in Analogous Beds of the Eifel in Germany. C. Rominger. (American Geologist, X, 56–63. 1892.)

Characters of Diphyphyllum Simcoense, (Bill.) Rom. W. H. Sherzer. (Am. Geologist, IV, 93–95. 1889.)

Chart of Rugose Corals. W. H. Sherzer. (Am. Geologist, VII, 273–301. 1891.)

Chonophyllum, Revision and Monograph of Genus. W. H. Sherzer. (Bul. Geol. Soc. America, III, 253–282. 1892.)

Cincinnati Group, Manual of the Paleontology. J. F. James. (Jour. Cincinnati Soc. Nat. Hist., Pt. I, XIV, 45–72; Pt. II, 149–163; Pt. III, XV, 88–100; Pt. IV, 144–159. 1891-1892.)

Corals from Devonian Rocks of Iowa. C. L. Webster. (American Naturalist, XXIII, 710–712. 1889.)

Correction of "North American Geology and Paleontology." W. H. Sherzer. (American Geologist, VI, 59–61. 1890.)

Correlation Papers; Cambrian. C. D. Walcott. (Bul. U. S. Geol. Sur., No. 81, 447 pp. 1891.)

Corals—Continued.

Development of Paleozoic Poriferous Coral. C. E. Beecher. (Trans. Connecticut Acad. Arts and Sciences, VIII, Pt. II, 207–214. 1892.)

Devonian Rocks of Islands, Shores or Immediate Vicinity of Lakes Manitoba and Winnepegosis. J. F. Whiteaves. (Geol. and Nat. Hist. Sur. Canada, Contributions to Canadian Paleontology, I, 255–360. 1892.)

Devonian Rocks of Mackenzie River Basin. J. F. Whiteaves. (Geol. and Nat. Hist. Sur. Canada, Contributions to Canadian Paleontology, Pt. III, 199–253. 1891.)

Fauna of Lower Cambrian or Olenellus Zone. C. D. Walcott. (U. S. Geol. Sur., Tenth Ann. Rep., 511–658. 1890.)

Geology of Artesian Wells at Atlantic City, N. J. L. Woolman. (Proc. Acad. Nat. Sci. Phila., XLII, 132–147. 1890.) Incidental references to fossils.

Geology of Licking County, Ohio; Pts. III and IV, Subcarboniferous and Waverly Groups. C. L. Herrick. (Bul. Sci. Lab. Dennison Univ., III, Pt. I, 13–110. 1888.)

Geology of Nicaragua. J. Crawford. (Proc. Am. As. Adv. Sci., XL, 261–270. 1892.) Abstract. Various species mentioned.

Geology of Portion of Province of Quebec. R. W. Ells. (Geol. and Nat. Hist. Sur. Canada, Ann. Rep., 1887, Pt. K, 114. 1888.) Mention made of different species.

Hadrophyllum Aplatus. [W. F. Cummins.] (Texas Geol. Sur., Second Ann. Rep., 552. 1890.)

Helderberg, Chemung, and Waverly Groups, Fossils found in the Collections of the Geological Survey of Pennsylvania. G. B. Simpson. (Trans. Am. Philos. Soc., XV, 435–460. 1888.)

Hindeastræa, a new Generic Form of Cretaceous Astræidæ. C. A. White. (Geological Magazine, (6), V, 362, 363. 1889.)

Invertebrate Fossils. A. H. Worthen. (Geol. Sur. Illinois, VIII, 71–154. 1890.) A number of species described as new from Iowa, Illinois, and Missouri.

Iowa, Geological Reconnaissance in Buchanan County. S. Calvin. (Bul. Lab. Nat. Hist. State Univ. Iowa, II, No. 2, 177–189. 1892.) Incidental references to fossils.

Kinderhook Fossils. R. R. Rowley. (American Geologist, III, 275, 276. 1889.)

Lower Coal Measures of Central Iowa, Fauna. C. R. Keyes. (Proc. Acad. Nat. Sci. Phila., 1888, 222–227. 1888.)

Maquoketa Shales and their Correlation with Cincinnati Group of Southwestern Ohio. J. F. James. (American Geologist, V, 335–356. 1890.) List of characteristic species.

Maryland and Virginia, Third Annual Geological Expedition. W. B. Clark. (Johns Hopkins Univ. Circulars X, No. 81, 69–71. 1890.) Various species mentioned.

Micro-Paleontology of Cambro-Silurian Rocks of Canada. A. H. Foord. (Geol. and Nat. Hist. Sur. Canada, Contri. to Micro-Pal., 26 pp. 1888.)

Miocene Mollusca of New Jersey. A. Heilprin. (Proc. Acad. Nat. Sci. Phila., XXXIX, 397–405. 1888.)

Monticulipora, Coral and not Polyzoan. J. F. James. (American Geologist, I, 386–392. 1888.)

Monticulipora, Studies. J. M. Nickels. (American Geologist, VI, 396–399. 1890.)

Oriskany Fauna in Columbia County, New York. J. M. Clarke. (Am. Jour. Sci. (3), XLIV, 410–414. 1892.)

Pachyphyllum, Contribution to Knowledge of. C. L. Webster. (American Naturalist, XXIII, 621–625. 1889.)

Paleozoic Fossils. A. F. Foerste. (Bul. Sci. Lab. Denison Univ., III, Pt. II, 117–136. 1888.)

Corals—Continued.

Paleontology of Indiana. S. A. Miller. (Geol. Sur. Indiana, 18th Ann. Rep., Paleontology, 79 pp. 1892.) Advanced sheets.

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Devonian Crustacea Described in Paleontology of New York, Vol. VII, List of Type Specimens in Possession of New York State Museum of Natural History. J. Hall. (Eighth Ann. Report State Geologist, New York, for 1889, 24–27. 1889.)

Devonian Rocks of Mackenzie River Basin. J. F. Whiteaves. (Geol. and Nat. Hist. Sur. Canada, Contributions to Canadian Paleontology, Part III, 199–253. 1891.)

Fauna of Lower Cambrian or Olenellus Zone. C. D. Walcott. (U. S. Geol. Sur., Tenth Ann. Rep., 511–658. 1890.)

Geology of Artesian Wells at Atlantic City, N. J. L. Woolman. (Proc. Acad. Nat. Sci., Phila., XLII, 132–147. 1890.) Incidental references to fossils.

New and Little Known American Paleozoic Ostracoda. E. O. Ulrich. (Jour. Cin. Soc. Nat. Hist., XIII, 104–137, 173–211. 1890–1891.)

Ostracoda from Pennsylvania, Paleozoic. T. R. Jones. (American Geologist, VI, 337–342. 1889.)

Paleontology of New York. J. Hall and J. M. Clarke. (Nat. Hist. New York, Pal., VII., 236 pp. 1888.)

Paleozoic Bivalve Entomostraca, North American Species. T. R. Jones. (Ann. and Mag. Nat. Hist., (6,) III, 154. 1889.)

Phyllocarid Crustacea from Middle Cambrian of Mount Stephens, B. C. J. F. Whiteaves. (Canadian Rec. Sci., v, No. 4, 205–208. 1892.)

Silurian Ostracoda, No. 1. E. O. Ulrich. (American Geologist, x, 263–270. 1892.) New forms described.

Species of Fossils from Cambro-Silurian Rocks of Manitoba. J. F. Whiteaves. (Trans. Roy. Soc. Canada, VII, Sec. IV, 75–83. 1889.)

Tracks of Organic Origin in Rocks of Animikie Group. A. R. C. Selwyn. (Am. Jour. Sci., (3,) XXXIX, 145–147. 1890.)

Turrilepas in Utica Formation of Ottawa, Canada. H. Woodward. (Geological Magazine, VI, 271–275. 1889.)

Crustacea Described in Paleontology of New York, Vol. VII, in the Possession of the New York State Museum of Nat. Hist., List of Type Specimens. J. Hall. (Eighth Ann. Rep. State Geologist, for 1889, 24–27. 1889.)

Crustacea from Lower Silurian of Tennessee, with Remarks on Others not well Known. J. M. Safford and A. W. Vodges. (Proc. Acad. Nat. Sci., Phila., 166–168. 1889.) Description of new species.

Crustacea from 1698–1889, Bibliography of Paleozoic. A. W. Vodges. (Bul. U. S. Geol. Sur., No. 63, 177 pp. 1890.)

Crustacea, Non-Trilobitic Genera and Species, Catalogue of North American Paleozoic. A. W. Vodges. (Ann. N. Y. Acad. Sci., v, No. 1. 1889.)

Crustaceous Tracks from the Potsdam Sandstone of Port Henry, New York. J. Hall. (New York State Mus. Nat. Hist., 42d Ann. Rep., 25–27. 1889.)

Cryptozoon Minnesotensis in Shakopee Limestone at Northfield, Minnesota. L. W. Chaney, jr. (Bul. Minnesota Acad. Nat. Sci., III, 280–284. 1891.)

Cuboides Zone and its Fauna, a discussion of Methods of Correlation. H. S. Williams. (Bul. Geol. Soc. America, I, 481–500. 1890.)

[**Cummins, W. F.**] Appendix to Geology of Coleman County. (Texas Geol. Sur., Second Ann. Rep., p. 552. Austin, 1890.) Describes as new *Hadrophyllum aplatus*.

Cummins, W. F., and Otto Lerch. Geological Survey of the Concho country, State of Texas. (American Geologist, Vol. v, pp. 321–335. Minneapolis, 1890.) Incidental references to fossils are given.

Cumnoria (Camptosaurus), Pelvis. S. W. Williston. (American Naturalist, XXIV, 472, 473. 1890.)

Cusps, Mammalian, Nomenclature. H. F. Osborn. (American Naturalist, XXII, 926–928. 1888.)

Cuyhoga Shale and Problem of Ohio Waverly. C. L. Herrick. (Bul. Geol. Soc. America, II, 31–47. 1891.) Incidental references to fossils.

Cyclocrinus, Ueber die Gattungen Pasceolus. F. Roemer. (Neues Jahrbuch f. Min., Geol. u. Pal., 74, 75. 1888.)

Cypræa, Fossil. J. H. Campbell. (The Nautilus, VI, 50, 51. 1892.)

Cystidians of Jefferson County, Indiana. G. C. Hubbard. (Proc. Indiana Acad. Sci., I, 67. 1891.)

Cytherea Convexa, Say. W. H. Dall. (The Nautilus, VI, 52, 53. 1892.)

Dakota (South).

Cambrian Fossils, Upper, Description of New Forms. C. D. Walcott. (Proc. U. S. Nat. Mus., XIII, 266–279. 1891.)

Cretaceous Echinoidea of North America, Revision. W. B. Clark. (Johns Hopkins Univ. Circulars, No. x, 87, 75–77. 1891.)

Paleozoic Fossils of Wisconsin, Minnesota, Iowa, Dakota, and Nebraska, Check-List. B. Bierbauer. (Bul. Minnesota Acad. Nat. Sci., III, 206–247. 1889.)

Tertiary Mammals. O. C. Marsh. (Am. Jour. Sci., (3), XXXIX, 523–525. 1890.)

Dall, W. H. Age of the Peace Creek Bone Beds of Florida. (Proc. Biol. Soc. Wash., Vol. VI, Mch. Washington, 1891.) Reviewed in Am. Naturalist, XXV, 400, 401, 1891.

Dall, W. H. Contributions to Tertiary Fauna of Florida. (Trans. Wagner Free Inst. Sci., Phila., Vol. III, pp. 1–178, 11 plates. Philadelphia, 1890.) This is on the plan of an annotated catalogue of the Gasteropods of the region, with brief notes on the structure of the shells. The following species are figured or described, most of them as new:

Lioplax floridana.
Helicina ballista.
Planorbis wilcoxii.
Bulimulus (? Auctus) floridanus Conrad,
Bulimulus (?Anctus) heilprinianus.
Bulimulus (?Anctus) americanus Dall.
Bulimulus (?Anctus) stearnsii Dall.
Helix latebrosa,

Helix instrumosa.
Helix crusta.
Helix crusta var. cunctator Dall.
Helix diespiter.
Helix direpta.
Helix haruspica.
Helix adamnis.
Strophia (Eostrophia) anodonta.
Strophia (Anodonta var.) floridana Dall.
Cylindrella floridana.
Ringicula floridana Dall.
Ringicula (floridana var.?) Guppyi Dall.
Utriculus vaginatus.
Scaphander (Bucconia) grandis Aldrich.
Dollabella aldrichi.
Planorbis conanti.
Planorbis disstoni.
Physa meigsii.
Conus planiceps Heilprin.
Conus cruzianus.
Drillia newmani.
Drillia acurugata.
Drillia acucincta.
Drillia ebenina.
Drillia edilia.
Drillia sedilia.
Drillia podagrina.
Drillia piscator.
Drillia bigemma.
Drillia (Lissotropis var.) perpolita Dall.
Cythara terminula.
Daphnella cingulata.
Daphnella modesta.
Glyphostoma watsoni.
Pleurotomella chariessa, var. pistillata, Dall.
Cancellaria conradiana.
Cancellaria venusta.
Trigonostoma tenera Philippi.
Trigonostoma subthomasiæ.
Olivella lata.
Ancillaria shepardi.
Marginella ballista.
Marginella precursor.
Marginella pardalis Dall.
Marginella floridana.
Marginella wilcoxiana.
Marginella aurora.
Marginella denticulata Conrad.
Marginella bella Conrad.
Marginella faunula.
Marginella elegantula.
Marginella newmani.
Marginella styria Dall.
Marginella gravida.
Marginella (Volutella) amiantula.
Liopeplum spillmani Dall.
Liopeplum subjugosum Dall.
Lyria costata Sowerby.
Volutilithes precursor Dall.
Scaphella (Caricella) leana Dall.
Scaphella (Caricella) subangulata Conrad.
Scaphella trenholmi, Tuomey and Holmes.
Scaphella floridana Heilprin.
Eucymba ocalana Dall.
Perplicaria perplexa.
Mitra holmesii.
Mitra wilcoxii.
Mitra (mississippiensis var.?) silicata Dall.
Conomitra staminea Conrad.
Mitromorpha cincta.
Mitromorpha pygmæa Dall.
Turbinella chipolana.
Turbinella regina Heilprin.
Turbinella scolymoides.
Mazzalina costata.
Latirus floridanus Heilprin.
Latirus callimorphus.
Latirus rugatus.
Latirus tessellatus.
Latirus hypsipettus.
Fulgur stellatum.
Fulgur echinatum.
Melogena sculpturata.
Melongena sculpturata var. turricula Dall.
Melongena subcoronata var. aspinosa Dall.
Solenosteira mengeana.
Solenosteira inornata.
Fusus (Papillina) dumosus Conrad.
Fusus ballista.
Fusus? quinquespinus.
Fusus (Chrysodomus?) nexilis.
Tritonidea pauper.
Nassa bidentata Emmons.
Nassa lapenotierei.
Nassa caloosaensis.
Anachis camax.
Anachis ithitoma.
Murex (Chicoreus?) micromeris.
Murex (Pteronotus) texilis Gabb.
Eupleura miocenica.

Muricidea spinulosa Heilprin.
Typhis linguiferus.
Typhis floridanus Dall.
Rapana tampaensis.
Coralliophila magna.
Coralliophila lepidota.
Opalia de-bouryi.
Eulima conoidea Kurtz and Stimpson.
Niso willcoxiana.
Phalium globosum.
Phalium aldrichi.
Ovula (Transovula) multicarinata.
Cypræa pinguis Conrad.
Cypræa heilprinii.
Cypræa wilcoxi.
Cypræa (Siphocypaera) problematica Heilprin.
Orthaulax pugnax Heilprin.
Orthaulax gabbi.
Rimella smithii.
Strombus albirupianus.
Strombus aldrichi.
Strombus chipolana.

The following species described or figured from Part II, 1892:

Bulla striata Brug., var. attenuata Dall.
Utriculus vaginatus Dall.
Conus planiceps Heilprin.
Conus adversarius Conrad.
Drillia myrmecoon.
Drillia hoplophorus.
Drillia aphanitoma.
Drillia schismatica.
Drillia sigela.
Glyphostoma johnsoni.
Daphnella elata Dall.
Cancellaria conradiana Dall, var. rotunda.
Cancellaria (Trigonostoma) sericea.
Marginella eulima.
Marginella onchidella.
Marginella (Volutella) dacria.
Scaphella (Caricella) podagrina Dall.
Perplicaria perplexa Dall.
Turbinella scolymoides Dall.
Fasciolaria (sparrowi var.?) acuta Emmons.
Fasciolaria elegans Emmons.
Glyptostyla pamamensis.
Mazzalina oweni Dall.
Melogena subcoronata Heilprin.
Solenosteira inornata Dall.
Fusus equalis Emmons.
Fusus caloosaensis Heilprin.
Fusus quinquespinus Dall.
Pisiana (Celatoconus) nux.
Ilyanassa (Paranassa) arata Say.
Ilyanassa (Paranassa) isogramma.
Nassa johnsoni.
Collumbella (Anachis) styliola.
Trophon (Aspella) engonatus.
Rapana tampaensis Dall var.?
Scala (Opalia) debouryi Dall.
Scala stearnsii Dall.
Niso lineata Conrad.
Odontostomia (Syrnola) caloosaensis.
Odontostomia (Syrnola) attenuata.
Turbonilla (Ondina) fragilis.
Turbonilla chipolana.
Turbonilla protracta.
Cassis (Phalium) globosum Dall.
Cassis (Phalium) aldrichi Dall.
Strombus chipolanus Dall.
Triforis mitella.
Cerithopsis scarphius.
Bittium chipolanum.
Bittium chipolanum, var. burnsii Dall.
Bittium permutabile.
Bittium cossmannii.
Bittium annettæ.
Bittium podagrinum.
Bittium (Styliferina?) priscum Dall.
Bittium (Styliferina) bioplex.
Bittium (Styliferina) cerithidoides Dall.
Cerithium caloosaense Dall.
Cerithium ocalanum.
Cerithium burnsii.
Cerithium platynema.
Cerithium callisoma.
Cerithium glaphyrea.
Cerithium glaphyrea, var. litharium Dall.
Cerithium coccodes.
Cerithium chipolanum.
Cerithium vinctum Whitfield.
Potamides hillsboroensis Heilprin.
Potamides (Lampanella) transecta Dall.
Potamides (Pyrazisinus) campanulatus Heilprin.
Potamides (Pyrazisinus) cornutus Heilprin.

Potamides (Pyrazisinus) scalatus Heilprin.
Potamides (Pyrazisinus) acutus.
Clava chipolana.
Clava caloosaensis.
Alaba chipolana.
Modulus turbanitus Heilprin.
Modulus wilcoxii.
Modulus compactus.
Cæcum floridanum, var. compactum Dall.
Cæcum coronellum.
Cæcum carolinianum.
Cæcum tortile.
Cæcum (tortile var.?) ibex.
Meioceras cingulatum.
Serpulorbis (granifera var.?) ballistæ Dall.
Turritella tampæ Heilprin.
Turritella tampæ var. pagodæformis Heilprin.
Turritella gatunensis Conrad.
Turritella terebriformis.
Turritella chipolana.
Turritella subgrundifera.
Turritella subanulata Heilprin.
Turritella perattenuata Heilprin.
Turritella apicalis Heilprin.
Tuba acutissima.
Fossarus lyra Conrad.
Fossarus (Isapis) anomala C. B. Adams.
Solarium amphitermum.
Dischelix retifera.
Hydrobia umbilcata Pilsbry.
Hydrobia amnicoloides Pilsbry.
Hydrobia mobiliana Dall.
Amnicola omphalotropis Pilsbry.
Rissoa lipeus.
Rissoa athymorhyssa.
Rissoa (Onoba) geræa.
Rissoa (Onoba) callistrophia.
Rissoa (Onoba) microcharia.
Rissoina johnsoni.
Rissoina chipolana.
Adeorbis strigillatus.
Adeorbis leai.
Amalthea wilcoxii.
Xenophora conchyliophora Born.
Natica alticallosa.
Natica (Cryptonatica) floridana.
Polynices (Lunatia) internus Say.
Ampullina fischeri.
Ampullina solidula.
Polynices (Amauropsis) burnsii.
Sigaretus chipolanus.
Sigeratus multiplicatus.
Turbo rhectogrammicus.
Astralium (Lithopoma) chipolanum.
Astralium (Lithopoma) precorsor.
Collonia elegantula.
Collonia radiata.
Collonia chipolana.
Collonia clairbornensis.
Chlorostoma (Omphalius) exoletum Conrad.
Gibbula americana.
Calliostoma philanthropus Conrad.
Calliostoma philanthropus var. eliminatum Dall.
Calliostoma (philanthropus var.?) conradianum Dall.
Calliostoma metrium.
Calliostoma wilcoxianum.
Calliostoma virginicum Conrad.
Calliostoma grammaticum.
Calliostoma exile.
Calliostoma eboreum Wagner.
Colliostoma wagnerii Dall.
Calliostoma aphelium.
Calliostoma nitens.
Calliostoma erosum.
Calliostoma harrisii.
Calliostoma cyclus.
Calliostoma (Eutrochus) limulum.
Calliostoma (Eutrochus) ceramicum.
Margarita tampaensis.
Solariella louisiana.
Solariella turritella.
Liotia (Arene) solariella Heilprin.
Liotia (Arene) coronata.
Liotia (Arena?) milium.
Liotia (Arene) perarmata.
Liotia (Arene) agenea.
Teinostoma milium.
Teinostoma caloosaense.
Teinostoma chipolanum.
Teinostoma opsitelotus.
Teinostoma microforatis.
Teinostoma steiratum.
Teinostoma vortex.
Teinostoma collinus.
Teinostoma funiculus.
Teinostoma pseudadeorbis.
Dillwynella naticoides Lea.
Cochliolepis striata Simpson.
Cyclostrema chipolanum.
Molleria duplinensis.

Cretaceous—Continued.

British Columbia, the Northwest Territory, and Manitoba, Cretaceous Fossils. J. F. Whiteaves. (Geol. and Nat. Hist. Sur. Canada, Contributions to Canadian Paleontology, I, 151–196. 1889.)

Carcharodon Mortoni, Gibbs. F. A. Lucas. (Proc. Biol. Soc. Wash., VII, 151, 152. 1892.)

Catalogue of Fossil Cephalopods in British Museum; Part I, Nautiloidea. A. H. Foord. (One volume, pp. i-xxxi and 1–344. London, 1888.)

Characters of Ceatopsidæ, with Notice of New Cretaceous Dinosaurs. O. C. Marsh. (Am. Jour. Sci., (3), XXXIX, 418–426. 1890.)

Check-List of Invertebrate Fossils from the Cretaceous Formations of Texas. R. T. Hill. (University of Texas, School of Geology, Circulars, 16 pp. 1889.)

Cretaceous Echinoidea of North America, Revision. W. B. Clark. (Johns Hopkins University Circulars, XI, No. 87, 75–77. 1891.)

Cretaceous and Tertiary Strata near Washington, N. C. T. W. Stanton. (American Geologist, VII, 333, 334. 1891.) Occurrence of characteristic fossils noted.

Cretaceous Mammalia. O. C. Marsh. (Am. Jour. Sci., (3), XXXVIII, 80–91. 1889.)

Cretaceous Mammalia, Part II. O. C. Marsh. (Am. Jour. Sci., (3), XXXVIII. 1889.)

Cretaceous Mammals of North America. O. C. Marsh. (Brit. As. Ad. Sci., 853, 854. 1890.)

Cheyenne Sandstone and Necomian Shales of Kansas. F. W. Cragin. (American Geologist, VI, 233–238. 1890.) Incidental references to fossils.

Cheyenne Sandstone and Necomian Shales of Kansas. F. W. Cragin. (American Geologist, VII, 23–33. 1891.) Occurrence of characteristic fossils noted.

Cheyenne Sandstone and Necomian Shales. F. W. Cragin. (American Geologist, VII, 179–181. 1891.) Occurrence of characteristic fossils noted.

Coal Measures of Central Iowa and Particularly in the Vicinity of Des Moines. C. R. Keyes. (American Geologist, II, 296–404. 1888.) Incidental references to Cretaceous fossils.

Concho Country, State of Texas, Geological Survey. W. F. Cummins and O. Lerch. (American Geologist, V, 321–335. 1890.) Incidental references to fossils.

Cypræa, Fossil. J. H. Campbell. (The Nautilus, VI, 50, 51. 1892.)

Denver Formation, Age. E. D. Cope. (Science, XIII, 290. 1889.)

Dinosauria, Family of Horned, from Cretaceous. O. C. Marsh. (Am. Jour. Sci., (3), XXXVI, 477, 478. 1888.)

Dinosauria, Horned, of Laramie. E. D. Cope. (American Naturalist, XXIII, 715–717. 1889.)

Dinosauria, New American. O. C. Marsh. (Am. Jour. Sci., (3), XXVII, 331–336. 1889.

Dinosauria of Laramie, Fourth Note. E. D. Cope. (American Naturalist, XXVI, 756–758. 1892.)

Dinosauria of Laramie. E. D. Cope. (American Naturalist, XXIII, 904–906. 1889.)

Dinosaurian Reptiles, Description. O. C. Marsh. (Am. Jour. Sci., (3), XXXIX, 81–86. 1890.)

Drift Deposits of Illinois. A. H. Worthen. (Geol. Sur. Illinois, VIII, 1–24. 1890.) Cretaceous fossils figured from the drift deposits of Iowa, Illinois, and Missouri.

Earlier Cretaceous Rocks of Northwestern Portion of the Dominion of Canada. G. M. Dawson. (Am. Jour. Sci., (3), XXXVIII, 120–127. 1889.) Various fossils considered.

Eastern Extension of Cretaceous in Iowa. C. R. Keyes. (Proc. Iowa Acad. Sci., I, Pt. II, 21. 1892.)

Cretaceous—Continued.

Events in North America Cretaceous History Illustrated in Arkansas-Texas Division of Southwestern Region of the United States. R. T. Hill. (Am. Jour. Sci., (3), XXXVII, 282–289. 1889.) Incidental references to fossils.

Exploration in Yukon and Mackenzie Basins, N. W. T. R. G. McConnell. (Geol. and Nat. Hist. Sur. Canada, Ann. Rep., 1888–1889, IV, Part D, 163 pp. 1891.) Mention made of different species.

Fishes of Mexico. J. Felix. (Palæontolographica, XXXVII, 189-194. 1891.)

Fishes, New Horizons of Fossil. E. D. Cope. (Am. As. Adv. Sci., XL, 285. 1892.) Abstract.

Foraminiferial Origin of Certain Cretaceous Limestones and the Sequence of Sediments in North American Cretaceous. R. T. Hill. (American Geologist, VI, 174–177. 1889.)

Gasteropoda and Cephalopoda of Raritan Clays and Greensand Marls of New Jersey. R. P. Whitfield. (U. S. Geol. Sur., Mon. XVIII, 402 pp. 1891.)

Gay Head, Martha's Vineyard. P. R. Uhler. (Trans. Maryland Acad. Sci., I, 204–212. 1888.)

Geological Reconnaissance in Southwestern Kansas. R. Hay. (Bul. U. S. Geol. Sur., No. 57, 49 pp. 1890.) Incidental references to fossils.

Geology of Nicaragua. J. Crawford. (Proc. Am. As. Adv. Sci., XL, 261-270. 1892.) Abstract. Various species mentioned.

Geology of the Southwest. R. T. Hill. (American Geologist, VII, 366–370. 1891.) Occurrence of characteristic fossils noted.

Gigantic Ceratopsidæ, or Horned Dinosaurs, of North America. O. C. Marsh. (Am. Jour. Sci., (3), XLI, 167-178. 1891.)

Gigantic Horned Dinosauria from the Cretaceous. O. C. Marsh. (Am. Jour. Sci., (3), XXXVIII, 173–176. 1889.)

Grouping Formations of Middle Cretaceous and the Employment of an Additional Term in its Nomenclature. G. H. Eldridge. (Am. Jour. Sci., (3), XXXVIII, 313–321. 1889.) Various fossils considered.

Hindeastræa, a New Generic Form of Cretaceous Astræidæ. C. A. White. (Geological Magazine, (3), V, 362, 363. 1889.)

Interesting Food Habit of the Plesiosauria. S. W. Williston. (Trans. Kansas Acad. Sci., XIII, 121, 122. 1893.)

Invertebrates, Fossil. A. H. Worthen. (Geol. Sur. Illinois, VIII, 71-154. 1890.) A number of species described as new from Iowa, Illinois, and Missouri.

Iowa, Later Cretaceous Deposits. C. A. White. (American Geologist, I, 221–227. 1888.) Various species of fossils referred to.

Jura, Necomian and Chalk of Arkansas. J. Marcou. (American Geologist, IV, 357-367. 1889.) Various species of fossils referred to.

Kansas Mosasauria. S. W. Williston. (Science, XVIII, 345. 1891.)

Kansas Mosasauria, Part I, Clidastes. S. W. Williston and E. C. Case. (Kansas Univ. Quart., I, 15–32. 1892.)

Kansas Pterodactyla. S. W. Williston. (Kansas Univ. Quart., I, 1-13. 1892.)

Les Blattes de l'époque houillère. C. Brongniart. (Comptes Rendus, CVIII, February 4, 1889.)

Kansas Nickel Mines, Logan County. F. H. Snow. (Trans. Kansas Acad. Sci., XI, 39–42. 1889.) Fossils mentioned.

Lower Cretaceous of Southwest and its Relations to the Underlying and Overlying Formations. C. A. White. (Am. Jour. Sci., (3), XXXVIII, 440–445. 1889.) Reference made to various species.

Macraster, eine neue Spatangoiden-Gattung aus der Kreide von Texas. F. Roemer. (Neues Jahrbuch f. Min., Geol. u. Pal., 191-195. 1888.)

Macraster Texanus. R. T. Hill. (American Naturalist, XXIII, 168. 1889.)

Mammalian Fauna of North America. H. F. Osborn. (American Naturalist, XXV, 298, 299. 1891.) Abstract.

Cretaceous—Continued.

Mammalia from Laramie Formation, E. D. Cope. (American Naturalist, XXVI, 758-762. 1892.)

Mammalia, Review of Discovery of Cretaceous. H. F. Osborn. (American Naturalist, XXV, 44, 45. 1891.)

Manitoba, Foraminifera and Radiolaria from Cretaceous. J. B. Tyrrell. (Trans. Roy. Soc. Canada, VIII, Sec. iv, 411-115. 1890.)

Marsupialia from the Laramie Formation. (Proc. Am. As. Adv. Sci., XLI, 177. 1892.) Abstract.

Maryland and Virginia, Third Annual Geological Expedition. W. B. Clark. (Johns Hopkins Univ. Circulars, IX, No. 81, 69-71. 1890.) Various species enumerated.

Maryland Eocene Tertiary and Its Cretaceous Associates. P. R. Uhler. (Trans. Maryland Acad. Sci., I, 11-32. 1888.)

Maryland, Notes and Illustrations to Observations on the Cretaceous and Eocene Formations. P. R. Uhler. (Trans. Maryland Acad. Sci., I, 97-104. 1888.)

Mesozoic Mammalia, Reply to Prof. Marsh's note. H. F. Osborn. (Proc. Am. As. Adv: Sci., XL, 290. 1892.) Abstract.

Mexico, Geology and Paleontology of Cretaceous Deposits. A. Heilprin. (Proc. Acad. Nat. Sci., Phila., XLII, 445-469. 1890.)

Middleton Formation of Tennessee, Mississippi and Alabama; with Note on Formations at La Grange, Tennessee. J. M. Safford. (American Geologist, IX, 634. 1892.) Incidental references to fossils.

Necomian and Gryphæa Pitcheri. J. Marcou. (American Geologist, V, 315-317. 1890.)

Neozoic Geology of Southwestern Arkansas. R. T. Hill. (Geol. Sur. Arkansas, Ann. Rep. 1888, II, 1-260. 1888.) Mention made of different species.

New Jersey, Geology of Artesian Wells at Atlantic City. L. Woolman. (Proc. Acad. Nat. Sci. Phila., XLII, 132-147. 1890.) Incidental references to fossils.

New Mexico, Mesozoic Series. J. Marcou. (American Geologist, IV, 155-165, and 216-229. 1889.) Various species of fossils referred to.

New or Little Known Saurian from the Benton of Kansas. F. W. Cragin. (American Geologist, II, 404-407. 1888.)

New York, Balanoid Cirripede from Marcellus Shale. R. P. Whitfield. (Bul. Mus. Nat. Hist., II, No. 2, 66-68. 1889.)

Niobrara Cretaceous of Western Kansas. S. W. Williston. (Trans. Kansas Acad. Sci., XII, 107-111. 1893.)

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Limnohyops fontinalis Cope.
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Evolution of Mammalian Molars to and from the Trituberculur Type. H. F. Osborn. (American Naturalist, XXII, 1067–1079. 1888.)

Evolution of Mammalian Molar Tooth to and from the Tritubercular Type. H. F. Osborn. (British As. Adv. Sci., 1888, 660. London, 1889.)

Evolution of Pelvis in General, Pelvis of Testudinata. G. Baur. (Jour. Morphology, VII, 345–360. 1892.)

Evolution of Strophostylus. C. R. Keyes. (Proc. Iowa Acad. Sci., I, Pt. II. 25. 1892.)

Examination by Means of Microscope of Specimens of Infusorial Earths of the Pacific Coast of the United States. A. M. Edwards. (Am. Jour. Sci., (3), XLII, 269–385. 1891.)

Expedition into Southern Maryland and Virginia, Third Annual Geological. W. B. Clark. (Johns Hopkins Univ. Circulars, No. 81, 69–71. 1890.) Various species enumerated.

Expedition to Mt. St. Elias in Summer of 1890. Israel C. Russell. (National Geographic Magazine, III, 200 pp. 1891.)

Explorations and Surveys in Portions of Northern New Brunswick and Adjacent Areas in Quebec and Maine. L. W. Bailey and Wm. McInnes. (Geol. and Nat. Hist. Sur. Canada, Ann. Rep. 1887, III, Part M, 527 pp. 1889.) Mention made of different species.

Explorations in Yukon and Makenzie Basin, N. W. T. R. G. McConnell. (Geol. and Nat. Hist. Sur. Canada, Ann. Rep. 1888–1889, Part D, IV, 163 pp. 1891.) Mention made of different species.

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Extinct Schleroderms. T. Gill. (American Naturalist, XXII, 828–830. 1888.) Diagnostic characters of the several families.

Extinct Sirenia. E. D. Cope. (American Naturalist, XXIV, 697–702. 1890.) General account of the order.

Extinction of Species. J. M. McCreery. (American Geologist, V, 100–104. 1890.)

Extinct Vertebrata from Miocene Rocks of Northwest Territories of Canada, recently described by Prof. Cope. H. M. Ami. (Science, XVIII, 53. 1891.)

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Grallator cuneatus, Hitchcock
Grallator tenuis, Hitchcock.
Anomœpus minor, Hitchcock.
Harpagopus dubius, Hitchcock.
Unisulcus marshi, Hitchcock.
Unisulcus minutus.

Faber, Charles, S. A. Miller and. New Species and New Structural Parts of Fossils. (Jour. Cincinnati Soc. Nat. Hist., Vol. XV. Cincinnati, 1892.)

Families of Vertebrata, Synopsis. E. D. Cope. (American Naturalist, XXIII, 849–877. 1889.)

Fauna and Flora of Marcellus Epoch in State of New York, List of Species. J. M. Clarke. (Eighth Ann. Rep. State Geologist, for 1889, 60–62. 1889.)

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Fauna at Base of Burlington Limestone in Northeastern Missouri. C. R. Keyes. (Am. Jour. Sci., (3), XLIV, 447–452. 1892.)

Faunal Resemblance between Cretaceous Formations of New Jersey and those of the Gulf States. R. P. Whitfield. (Bul. Am. Mus. Nat. Hist., II, No. 2, 113–116. 1889.)

Fauna of Florida, Tertiary. W. H. Dall. (Trans. Wagner Free Inst. Sci., III, 1–200. 1890.)

Fauna of Lower Cambrian or Olenellus Zone. C. D. Walcott. (U. S. Geol. Sur., Tenth Ann. Rep., 511–568. 1890.)

Fauna of Lower Coal Measures of Central Iowa. C. R. Keyes. (Proc. Acad. Nat. Sci., Phila., 1888, 222–247. 1888.)

Fauna of Lower Coal Measures of Central Iowa, Contribution. C. R. Keyes. (Proc. Iowa Acad. Sci., I, Pt. II, 22–23. 1892.)

Fauna of Minnesota, Range and Distribution of Lower Silurian. F. W. Sardeson. (Bul. Minnesota Acad. Sci., III, 326–343. 1891.)

Fauna of Rocks at Fort Cassin, Vermont, with Descriptions of New Species. R. P. Whitfield. (Bul. Am. Mus. Nat. Hist., III, 26–39. 1890.)

Fauna of St. John Group, No. V. G. F. Matthew. (Trans. Roy. Soc. Canada, VIII, Sec. IV, 123–166. 1890.)

Faunas, Devonian of Iowa, Relation. H. S. Williams. (American Geologist, III, 230–233. 1889.)

Faunas, Fossil, in Central Iowa. C. R. Keyes. (Proc. Acad. Nat. Sci., Phila., 242–265. 1891.)

Faunas of Upper Devonian, Genesee Section of New York. H. S. Williams. (U. S. Geol. Sur., Bul. 41, 121 pp. 1888.)

Faunas, Relations of American and European. J. W. Gregory. (Bul. Geol. Soc. America, III, 101–108. 1892.)

Fauna, Tertiary of Florida. W. H. Dall. (Trans. Wagner Free Inst. Sci., Phila., III, 1–178. 1890.)

Fauna, Vertebrate, in Silurian (Ordovician) Strata. C. D. Walcott. (Bul. Geol. Soc. America, III, 153–172. 1892.)

Fauna with Goniatites Intumescens, Beyrich, in Western New York. J. M. Clarke. (American Geologist, VIII, 86–105. 1891.)

Faune du Calcaire d'Erbray (Loire-Inférieure). C. Barrois. (Mém. Soc. géol. du Nord, tome III, 348 pp. 1889.) Reviewed in Am. Jour. Sci., (3), XXXVIII, p. 164, 1889.

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Felix, Johannes. Cretaceous Fishes from Mexico. (Palæontographica, Band XXXVII, pp. 189–194. Cassel, 1891.) Reviewed in Geol. Magazine, iii, VIII, 414. 1891.

Felix, Johannes, und Hans Lenk. Ueber die tektonischer Verhältnisse der Republik Mexiko. (Zeitsch. der Deut. Geol. Gesell., Band XLIV, Heft 2, pp. 303–324. Berlin, 1892.) Contains numerous references to fossils.

Fenestellidæ, Lower Helderberg, with Explanations of Plates illustrating Species of the Hamilton Group Described in the Report of the State Geologist for 1886. J. Hall. (Forty-first Rep. State Mus. Nat. Hist., 393, 394. 1888.)

Field Work U. S. Geological Survey. S. H. Scudder. (Psyche, VI, 101, 102. 1891.) Incidental references to fossils.

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Fish from Eocene Beds of Wyoming. R. P. Whitfield. (Bul. Am. Mus. Nat. Hist., III, 117–120. 1890.)

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Fish Remains in Lower Helderberg of New Brunswick. G. F. Matthew. (American Geologist, VIII, 61, 62. 1891.)

Fish Remains in Lower Silurian Rocks. (Science, XVII, 107. 1891.)

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Fish Remains, Oldest Known. (American Geologist, VII, 329–330. 1891.)

Fishes and Fossil Plants of Triassic Rocks of New Jersey and Connecticut Valley. J. S. Newberry. (U. S. Geol. Sur., Mon. xiv, 26 pp. 1888.)

Fishes, Characters of some Paleozoic. E. D. Cope. (Proc. U. S. Nat. Mus., xiv, 447–463. 1891.)

Fishes, Fossil, New Species; by J. S. Newberry: Trans. N. Y. Acad. Sci., vi. (Am. Jour. Sci., (3), xxxv, 489–499. 1888.) Brief review of the volume.

Fishes from South Dakota. E. D. Cope. (American Naturalist, xxv, 654–658. 1891.)

Fishes of Mexico. J. Felix. (Palæontographica, xxxvii, 189–194. 1891.)

Fishes from South Dakota. E. D. Cope. (American Naturalist, xxv, 654–658. 1891.)

Fishes, New Horizon. E. D. Cope. (Proc. Am. As. Adv. Sci., xl, 285. 1892.) Abstract.

Fishes of Devonian Rocks of Canada. J. F. Whiteaves. (Trans Roy. Soc. Canada, Vol. vi, Sec. iv, 77–96. 1888.)

Fishes of Erie Shale of Ohio. J. S. Newberry. (Trans. New York Acad. Sci., vii, 178–180. 1888.) Abstract.

Fishes of North America, Fossil. J. S. Newberry. (U. S. Geol. Sur., Mon. xvi, 340 pp. 1889.)

Fissurellidæ of United States, Catalogue. H. A. Pilsbry and C. W. Johnson. (The Nautilus, v, 102–107. 1892.)

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Age of Peace Creek Bone Beds of Florida. W. H. Dall. (Proc. Biol. Soc. Wash., vi, Mch. 1891.)

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Fossils of Pliocene ("Floridian") Formation of the Caloosahatchie. A. Heilprin. (Trans. Wagner Free Inst. Sci., i, 68–134. 1887.)

Hippotherium and Rhinoceras from Florida. J. Leidy. (Proc. Acad. Nat. Sci., Phila., 182, 183. 1890.)

Mammalian Remains from Rock Crevice in Florida. J. Leidy. (Trans. Wagner Free Inst. Sci., ii, 13–17. 1889.)

Sabre-Toothed Tiger and Other Quaternary Mammals of Florida. J. Leidy. (Proc. Acad. Nat. Sci., Phila., xli, 29–36. 1890.)

Specimens of Bison Latiformis from Florida. F. A. Lucas. (Proc. Biol. Soc. Wash., Mch. 1891.)

Tertiary Fauna of Florida. W. H. Dall. (Trans. Wagner Free Inst. Sci., iii, 1–200. 1890.)

Vertebrates, Fossil. J. Leidy. (Proc. Acad. Nat. Sci., Phila., xlii, 64, 65. 1890.)

Vertebrates, Fossil, from Florida. J. Leidy. (Proc. Acad. Nat. Sci.. Phila., xli, 96–99. 1889.)

Vertebrate Remains from Peace Creek, Florida. J. Leidy. (Trans. Wagner Free Inst. Sci., ii, 19–31. 1889.)

Florissant, Fossil Butterflies. S. H. Scudder. (U. S. Geol. Sur., Eighth Ann. Rep., 433–474. 1890.)

Foerste, A. F. Age of the Cincinnati Anticlinal. (American Geologist, Vol. vii, pp. 97–109. Minneapolis, 1891.) Numerous references to fossils.

Foerste, A. F. Clinton Group of Ohio; Part iv, Chemical and Stratigraphical Geology and Geographical Paleontology. (Bul. Sci. Lab. Dennison Univ., Vol. iii, Pt. i, pp. 3–12. Granville, 1888.) General consideration of the group.

Foerste, A. F. Geological Section at Todd's Fork, Ohio. (American Geologist Vol. ii, pp. 412–419. Minneapolis, 1888.) The following species described and figured as new:

Oenites deripiens.
Arabellites procursus.
Lumbriconereites austini.
Eunicites falcatus.
Eunicites confinis.
Eunicites paululus.

Foerste, A. F. Notes on Paleozoic Fossils. (Bul. Sci. Lab. Dennison Univ., Vol. III, Pt. II, pp. 117-136, 1 plate. Granville, 1888.) The new species described are:

Lichas halli.
Encrinurus bromningi.
Encrinurus mitchelli.
Phacops serratus.
Cyathophyllum australe.

Reviewed in Neues Jahrbuch, 310, 1889.

Foerste, A. F. Paleontological Horizons of Limestone at Nahant, Mass. (Boston Soc. Nat. Hist., Vol. XXIV, pp. 26-263. Boston, 1889.) A number of species of Hyolites noted.

Foerste, A. F. Sections of Fossils. (Science, Vol. XI, p. 22. New York, 1888.) Remarks on the practicability of the use of internal characters as revealed by sections in the determination of fossils.

Foerste, A. F., N. S. Shaler and. Preliminary Description of North Attleborough Fossils. (Bul. Mus. Comp. Zool., No. 2, Geol. Ser., II, 27-41. 1888.)

Foord, Arthur H. Catalogue of the Fossil Cephalopods in the British Museum; Part I, Nautiloidea. (One vol., pp. i-xxxi and 1-344. London, 1888.)

The arrangement of the group described is primarily geological, secondarily stratigraphical, each genus being dealt with separately from the appearance to its extinction. This is a very complete description and synonymic catalogue of the cephalopods in the British Museum of Natural History. The work is of the greatest importance for those wishing to study exact limitation of the nautiloid genera and their classification. The American species described are the following:

Orthoceras decrescens Billings.
Orthoceras arcuoliratum Hall.
Orthoceras junceum Hall.
Orthoceras multicameratum Emmons.
Orthoceras lamellosum Hall.
Orthoceras duseri Hall & Whitfield.
Orthoceras halli ? S. A. Miller.
Orthoceras mohri ? S. A. Miller.
Orthoceras dyeri ? S. A. Miller.
Orthoceras transversum ? S. A. Miller.
Orthoceras laqueatum ? S. A. Miller.
Orthoceras articum sp. nov.
Orthoceras griffithi ? Haughton.
Orthoceras annulatum Sowerby var. americanum var. nov.
Orthoceras strix Hall & Whitfield.
Orthoceras davisoni Billings.
Orthoceras cingulum Hall.
Orthoceras bebryx var. cayuga Hall.
Endoceras rottermundi Barrande.
Endoceras proteiforme Hall.
Endoceras magniventrum Hall.
Endoceras ? ommaneyi Salter.
Piloceras canadense Billings.
Actinoceras bigsbyi Bronn.
Actinoceras beloitense Whitfield.
Actinoceras remotiseptum Hall.
Actinoceras richardsoni Stoker.
Actinoceras crebuseptum Hall.
Actinoceras capitolium ? Safford.
Actinoceras backi Stoker.
Actinoceras whitei Stoker.
Actinoceras vertebratum Hall.
Actinoceras spheroidale Stoker.
Actinoceras inops ? Dawson.
Discosorus conoideus Hall.
Discosorus remotus sp. nov.
Discosorus gracilis sp. nov.
Huronia bigsbyi Stoker.
Huronia vertebralis Stoker.
Huronia minuens Barrande.
Huronia obligua Stoker.
Huronia portlocki Stoker.
Huronia turbinata Stoker.
Huronia distincta Barrande.
Gomphoceras scrinium Hall.
Gomphoceras nestor Hall.
Poterioceras constrictum.
Cyrtoceras (Neloceras) falx Billings.
Cyrtoceras (Neloceras) arcticameratum Hall.
Gonioceras anceps Hall.
Jovellania murrayi Billings.

Foord, Arthur H. Catalogue of the Fossil Cephalopoda in the British Museum; Part II. (One vol., pp. i–xxv and 1–407. London, 1890.) The following American forms are described:

Trochoceras boreale sp. nov.
Trochoceras americanum Billings.
Trochoceras halli Foord.
Trochoceras ammonius Conrad.
Trocholites planorbiformis Conrad.
Gyroceras cyclops Hall.
Gyroceras trivolve Conrad.
Barrandeoceras oriens Hall.
Temmochilus latus Meek & Worthen.
Temmochilus coxanus Meek & Worthen.
Nautilus dekayi Morton.

Foord, Arthur H. Contributions to Micro-Paleontology of the Cambro-Silurian Rocks of Canada. (Geol. and Nat. Hist Sur. Canada, Contrib. to Micro-Pal., 26 pp., 7 plates. Ottawa, 1888.) The following are described and figured:

Monticulipora.
Monticulipora westoni sp. nov.
Monticulipora billingsi sp. nov.
Homotrypa.
Homotrypa similis sp. nov.
Prasopora.
Prasopora occulata sp. nov.
Prasopora affinis sp. nov.
Prasopora selwynii, Nicholson.
Diplotrypa.
Diplotrypa regularis sp. nov.
Diplotrypa whiteavesii, Nicholson.
Monotrypa undulata.
Monotrypa undulata, Nicholson.
Monotrypella.
Monotrypella trentonensis, Nich.
Monotrypella æqualis, Ulrich.
Amplexopora.
Amplexopora canadensis sp. nov.
Amplexopora discoidea, Nicholson.
Batostoma.
Batostoma ottawaense sp. nov.
Heterothypa.
Heterothypa solitaria, Ulrich.
Spatiopora.
Spatiopora areolata sp. nov.
Ptilodictya pavonia, d'Orbigny.
Ptilodictya maculata, Ulrich.
Tetradium peachii var. canadense var. nov.
Tetradium huronense, Billings.

Footprints from Connecticut Valley. H. M. Mitivier. (Proc. Am. As. Adv. Sci., XL, 286. 1892.) Abstract.

Footprints from Jura-Trias of New Jersey. J. Eyerman. (Proc. Acad. Nat. Sci., Phila., 32, 33. 1889.)

Foraminifera and Radiolaria from Cretaceous of Manitoba. J. B. Tyrrell. (Trans. Roy. Soc. Canada, VIII, Sec. IV, 111–115. 1890.)

Foraminifera from Post-Pliocene Sand at Santa Barbara, California. A. Woodward. (New York Micros. Soc., Jour., V, 24, 25. 1889.)

Foraminiferial Origin of Certain Cretaceous Limestones and the Sequence of Sediments in North American Cretaceous. R. T. Hill. (American Geologist, VI, 174–177. 1889.) Various species of fossils referred to.

Ford, S. W. Certain Fossils Discovered within City Limits of Quebec. (Trans. New York Acad. Sci., Vol. VII, pp. 2–5. 1888.) The following are described:

Remoplenoides? schlotheimi Bill.
Shumardia granulosa? Bill.
Harpides sp.?
Bathyurus canadatus Bill.
Leptæna? or Strophomena?
Graptolites pristimiformis H.
Cystidian.

Formations, Lower Silurian, of Wisconsin and Minnesota Compared. F. W. Sardeson. (Bul. Minnesota Acad. Nat. Sci., III, 319–326. 1891.) Incidental references to fossils.

Fort Cassin Rocks and their Fauna. R. P. Whitfield. (Bul. Geol. Soc. America, I, 513–515. 1890.)

Fossil Fish in Cleveland Shale. E. W. Claypole. (American Geologist, II, 62–64. 1889.)

Fossil Insects of North America; by Samuel H. Scudder. Review. (Am. Jour. Sci., (3), XLI, 330. 1891.) Brief notice.

Fossil of Puma. J. Leidy. (Proc. Acad. Nat. Sci., Phila., XL, 9, 10. 1888.)

Fossils, Catalogue, Occurring in Missouri. G. Hambach. (Bul. Geol. Sur. Missouri, No. 1, 60–85. 1890.)

Fossils Collected in Northwest Territory, Canada, by Naturalists from University of Iowa. S. Calvin. (Bul. Lab. Nat. Hist. State Univ. Iowa, ii, No. 2, 163–165. 1892.)

Fossils, Cretaceous, from British Columbia, the Northwest Territory, and Manitoba. J. F. Whiteaves. (Geol. and Nat. Hist. Sur. Canada, Contributions to Canadian Paleontology, i, 161–196. 1889.)

Fossils Discovered within City Limits of Quebec. S. W. Ford. (Trans. New York Acad. Sci., vii, 2–5. 1888.)

Fossils, Eocene, from Texas. T. H. Aldrich. (The Nautilus, iv, 25. 1890.)

Fossils from Iowa Devonian. C. R. Keyes. (Proc. Acad. Nat. Sci., Phila., 247–249. 1888.)

Fossils from Niagara Shales of Western New York. E. N. S. Ringueberg. (Proc. Acad. Nat. Sci., Phila., xl, 131–137. 1888.)

Fossils from Silurian Rocks of Southeastern Portion of District of Saskatchwan; J. F. Whiteaves: Canadian Rec. Sci., Apr., 1891. (American Geologist, Vol. ix, p. 56. 1892.) A brief notice of the paper.

Fossils from Triassic Rocks of British Columbia. J. F. Whiteaves. (Geol. and Nat. Hist. Sur. Canada, Contributions to Canadian Paleontology, i, 127–148. 1889.)

Fossils, Hudson River, of Jefferson County, Indiana. G. C. Hubbard. (Proc. Indiana Acad. Sci., i, 69. 1891.)

Fossils in "Archæan" Rocks of Central Piedmont, Virginia. N. H. Darton. (Am. Jour. Sci., (3), xliv, 50–52. 1892.)

Fossils in Caves and Crevices of Limestone Rocks of Pennsylvania. J. Leidy. (Geol. Sur. Pennsylvania, Ann. Rep. 1887, 1–20. 1889.)

Fossils in Determining the Age of Geologic Terranes. H. S. Williams. (Proc Am. As. Adv. Sci., xxxvii, 206. 1889.) Abstract.

Fossils in Limestones of Frederick County, Maryland. C. R. Keyes. (Johns Hopkins Univ. Circulars, No. 84, 32. 1890.)

Fossils in Lower Taconic of Emmons. C. D. Walcott. (Proc. Am. As. Adv. Sci., xxxvi, 202–203. 1888.) Abstract.

Fossil Sirenian from California. O. C. Marsh. (Am. Jour. Sci., (3), xxxv, 94–96. 1888.)

Fossils known to occur in Waverly Group of Ohio, Compiled, Tabulated List. W. F. Cooper. (Bul. Sci. Lab. Dennison Univ., iv, Pt. i, 123–130. 1889.)

Fossils, B. Shimek. (Bul. Lab. Nat. Hist. State Univ. Iowa, ii, No. 1, 89–98. 1890.)

Fossils near Boston, Recent. W. Upham. (Am. Jour. Sci., (3), xliii, 201–209. 1892.

Fossils, New Species and New Structural Parts. S. A. Miller and Charles Faber. (Jour. Cincinnati Soc. Nat. Hist., xv, 1892.)

Fossils, Notes on Paleozoic. A. F. Foerste. (Bul. Sci. Lab. Dennison Univ., iii, Pt. ii, 117–136. 1888.)

Fossils Occurring in Missouri, Catalogue. G. Hambach. (Geol. Sur. Missouri, Bul. No. 1, 60–85. 1890.)

Fossils of Littleton, New Hampshire. R. Pumpelly. (Am. Jour Sci., (3), xxxv, 79, 80. 1888.) Announcement of the discovery of Niagara fossils on Parker Mountain.

Fossils of Loess at Iowa City, Iowa. B. Shimek. (American Geologist, i, 149–152. 1888.)

Fossils of Western Taconic Limestone in the Eastern Part of Dutchess County, N. Y. W. B. Dwight. (Am. Jour. Sci., (3), xxxix, 71. 1890.)

Fossils, Sections. A. F. Foerste. (Science, xi, 22. 1888.)

Fossils, Sections. J. F. James. (Science, xi, 50. 1888.)

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Frech, F. Attachment of Platyceras to Palæocrinoids and its Effects in Modifying the Form of the Shell; by C. R. Keyes: Proc. Am. Philosophical Soc., XXV, 1888. Review. (Neues Jahrbuch, 182. 1891.)

Frech, F. Corals and Bryozoa from Lower Helderberg, Upper Helderberg, and Hamilton Group; J. Hall and G. Simpson: Paleontology of New York, IV. Review. (Neues Jahrbuch, pp. 183–184. 1892.)

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Frech, F. Fossils from Niagara Shales of Western New York; by E. N. S. Ringueberg: Proc. Acad. Nat. Sci., Phila., 1888. Review. (Neues Jahrbuch, 154. 1892.)

Frech, F. Fossil Shells of Silurian and Devonian Rocks of Kentucky; by H. Nettleworth: Kentucky Geol. Sur., 1889. Review. (Neues Jahrbuch, 461, 462. 1891.)

Frech, F. New Genus of Madreporaria (Glyphastrica) with remarks on Morphology of Glyphastrica Forbesi, E. & H, from the Tertiary of Maryland; P. M. Duncan: Quart. Jour. Geol. Soc., London, 24, 1887. Review. (Neues Jahrbuch, 338, 339. 1888.)

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Gasteropoda.

Additions and Corrections to Miller's North American Paleontology. C. L. Herrick. (American Geologist, V, 253–255. 1890.)

Additions to Observations on Cretaceous and Eocene Formations of Maryland. P. R. Uhler. (Trans. Maryland Acad. Sci., I, 45–72. 1888.)

Calciferous Formation in Champlain Valley. E. Brainard and H. M. Seely. (Bul. Geol. Soc. America, I, 501–516. 1890.) Incidental references to fossils.

Calciferous Sandrock of Lake Champlain, Imperfectly Known Fossils, and Descriptions of Several New Forms. R. P. Whitfield. (Bul. Am. Mus. Nat. Hist., II, 42–63. 1889.)

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Lingulasma.
Lakhmina.
Trimerella.
Dinobolus.
Monomerella.
Rhinobolus.
Lingulella.
Linguelepis.
Barroisella gen. nov.
Tomasina gen. nov.
Obolella.
Leptobolus.
Elkania.
Paterula.
Obolus.
Aulonotreta.
Schmidtia.
Monobolina.
Neobolus.
Spondylobolus.
Mickwitzia.
Schizobolus.
Discinolepis.
Kutorgina.
Schizopholis.
Volorthia.
Iphidea.
Acrothele.
Acrotreta.
Conotreta.
Discinopsis gen. nov.
Linnarssonia.
Mesotreta.
Siphonotreta.
Schizambon.
Keyserlingia.
Helmersenia.
Discina.
Lindstrœmella subgen. nov.
Æhlertella subgen. nov.
Rœmerella subgen. nov.
Trematis.
Schizocrania.
Crania.
Craniella.
Cardinocrania.
Pholidops.
Orthis.
Plectorthis.
Dinorthis.
Plæsiomys.
Hebertella.
Orthostrophia.
Platystrophia.
Hetororthis.
Bilobites.
Dalmanella.
Rhipidomella.
Schizophoria.
Orthotichia.
Enteletes.
Billingsella gen. nov.

Hall, James—Continued.

Protorthis gen. nov.
Clitambonites.
Polytæchia.
Scenidium.
Orthidium.
Strophomena.
Orthothetes.
Hipparionyx.
Kayserella gen. nov.
Derbya.
Meekella.
Streptorhynchus.
Triplecia.
Mimulus.
Streptis.
Leptæna.
Rafinesquina gen. nov.
Strophodonta.
Strophonella.
Leptella gen. nov.
Plectambonites.
Christiania gen. nov.
Leptænisca.
Davidsonia.
Chonetes.
Chonetina.
Chonostrophia gen. nov.
Chonopectus gen. nov.
Chonetella.
Strophalosia.
Daviesiella.
Aulosteges.
Productus.
Productella.
Proboscidella.
Etheridgina.

The following species are described and figured as new:

Lingula compta sp. nov.
Lingula scutella sp. nov.
Lingula flabellula sp. nov.
Lingula paracletus sp. nov.
Lingula lingulata sp. nov.
Lingulops granti sp. nov.
Monomerella greeni sp. nov.
Monomerella kingi sp. nov.
Monomerella ortoni sp. nov.
Monomerella egani sp. nov.
Rhinobolus davidsoni sp. nov.
Siphonotreta (?) minnesotensis sp. nov.
Orbiculoidea (Schizotreta) ovalis sp. nov.
Orbiculoidea numulus sp. nov.
Orbiculoidea herzeri sp. nov.
Lindstrœmella aspidum gen. et sp. nov.
Schizocrania schucherti sp. nov.
Schizocrania (?) helderbergia sp. nov.
Crania agarcina sp. nov.
Crania pulchella sp. nov.
Crania granosa sp. nov.
Crania favincola sp. nov.
Craniella ulrichi sp. nov.
Pholidops calceola sp. nov.
Pholidops patina sp. nov.
Orthis? saffordi sp. nov.
Orthis? holstoni Safford.
Orthis (Plæsiomys) loricula sp. nov.
Orthis (Dalmanella) arcuaria sp. nov.
Orthis (Dalmanella) superstes sp. nov.
Orthis (Rhipidomella) oweni sp. nov.
Orthis (Schizophoria) senecta sp. nov.
Strophomena conradi sp. nov.
Strophomena winchellii sp. nov.
Orthothetes desideratus sp. nov
Derbya ruginosa sp. nov.
Derbya costatula sp. nov.
Derbya broadheadi sp. nov.
Derbya bennetti sp. nov.
Derbya cymbula sp. nov.
Derbya affinis sp. nov.
Derbya (?) biloba sp. nov.
Streptorhynchus ulrichi sp. nov.
Christiania subquadrata sp. nov.
Leptænisca adnascens sp. nov.
Leptænisca tangens sp. nov.
Strophalosia rockfordensis sp. nov.
Chonostrophia helderbergia sp. nov.

Reviewed in Am. Geologist, x, 251-253, 1892; also Am. Jour. Sci., (3), XLIV, 330-332. 1892.

Hall, James, and John M. Clarke. Paleontology of New York. (Nat. Hist. New York, Pal., Vol. VII, 236 pp., 36 plates. Albany, 1888.) Descriptions of the trilobites and other crustacea of the Oriskany, Upper Helderberg, Hamilton and Catskill groups. The introduction contains a synopsis of genera, with descriptions and bibliographies of the following:

Calymene.
Homalonotus.
Bronteus.
Phacops.

all, James—Continued.

Dalmanites.
Hausmannia.
Coronura subgen. nov.
Cryphæus subgen. nov.
Odontocephalus subgen. nov.
Chasmops subgen. nov.
Corycephalus subgen. nov.
Acidaspis.
Lichas.
Terataspis.
Conolichas subgen. nov.
Hoplolichas subgen. nov.
Arges subgen. nov.
Ceratolichas subgen. nov.
Dicranogmus subgen nov.
Proetus.
Phaethonides.
Cyphaspis.
Protolimulus.
Eurypterus.
Stylonurus.
Ceratiocaris.
Echinocaris.
Elymocaris.
Tropidocaris.
Mesothyra gen. nov.
Dithyrocaris.
Rhinocaris gen. nov.
Spathiocaris.
Dipterocaris.
Palæpalæmon.
Estheroa.
Schizodiscus gen. nov.
Protobalanus gen. nov.
Strobilepis gen. nov.
Turrilepas.

The work itself contains descriptions with figures of the following species:

Calymene platys Green.
Homalonotus major Whitfield.
Homalonotus dekayi (Green).
Homalonotus vanuxemi Hall.
Bronteus tullius sp. nov.
Phacops cristata Hall.
Phacops rana Hall.
Phacops cristata var. pipa var. nov.
Phacops bufo (Green).
Phacops cacapona Hall.
Phacops nupera (Hall).
Dalmanites (Hausmannia) pleuroptyx (Green).
Dalmanites (Hausmannia) concinnus Hall.
Dalmanites (Hausmannia) concinnus var. serrula var.
Dalmanites (Hausmannia) phacoptyx sp. nov.
Dalmanites (Hausmannia) meeki Walcott.
Dalmanites (Coronura) aspectans (Conrad).
Dalmanites (Coronura) myrmecophorus (Green).
Dalmanites (Coronura) emarginatus (Hall).
Dalmanites (Cryphæus) comis sp. nov.
Dalmanites (Cryphæus) pleione Hall.
Dalmanites (Cryphæus) boothii Greene.
Dalmanites (Cryphæus) boothii var. calliteles.
Dalmanites (Cryphæus) barrisi sp. nov.
Dalmanites (Odontocephalus) selenurus (Eaton).
Dalmanites (Odontocephalus) bifidus Hall.
Dalmanites (Odontoce phalus) ægeria Hall.
Dalmanites (Odontocephalus ?) coronatus Hall.
Dalmanites (Corycephalus) regalis Hall.
Dalmanites (Corycephalus) pygmæus sp. nov.
Dalmanites (Corycephalus) dentatus Barrett.
Dalmanites (Chasmops) anchiops (Green).
Dalmanites (Chasmops) anchiops var. armatus Hall.
Dalmanites anchiops var. sobrinus var. nov.
Dalmanites (Chasmops) calypso (Hall).
Dalmanites (Chasmops) erina Hall.
Dalmanites (Chasmops) macrops Hall.
Acidaspis callicera sp. nov.
Acidaspis sp. ?
Acidaspis romingeri sp. nov.
Lichas terataspis grandis Hall.
Lichas (Conolichas) hispidus sp. nov.
Lichas (Conolichas) eriopis Hall.
Lichas (Conolichas) ? sp.
Lichas (Hoplolichas) hylæus sp. nov.
Lichas (Arges) contusus sp. nov.
Lichas (Ceratolichas) gryps sp. nov.
Lichas (Ceratolichas) dracon sp. nov.
Lichas (Dicranogmus) ptyonurus sp. nov.
Proetus conradi Hall.

Hall, James—Continued.

Proetus angustifrons Hall.
Proetus hesione Hall.
Proetus sp. ?
Proetus curvimarginatus sp. nov.
Proetus latimarginatus sp. nov.
Proetus crassimarginatus Hall.
Proetus folliceps sp. nov.
Proetus clarus Hall.
Proetus canaliculatus Hall.
Proetus verneulli Hall.
Proetus microgemma sp. nov.
Proetus stenopyge sp. nov.
Proetus ovifrons sp. nov.
Proetus pelphinulus sp. nov.
Proetus (?) plahimarginatus Meek.
Proetus tumidus sp. nov.
Proetus haldemani Hall.
Proetus macrocephalus Hall.
Proetus rowii (Green).
Proetus marginalis (Conrad).
Proetus jejunus sp. nov.
Proetus phocion Billings.
Proetus prouti Shumard.
Proetus nevadæ sp. nov.
Proetus occidens Hall.
Proetus (?) longicaudus Hall.
Proetus missouriensis Shumard.
Phaethonides arenicolus sp. nov.
Phaethonides varicella sp. nov.
Phoethonides gemmæus sp. nov.
Phaethonides cyclurus sp. nov.
Phaethonides (?) denticulatus Meek.
Cyphaspis minuscula Hall.
Cyphaspis stephanophora sp. nov.
Cyphaspis diadema sp. nov.
Cyphaspis hybrida sp. nov.
Cyphaspis ornata (Hall).
Cyphaspis ornata var. baccata var. nov.
Cyphaspis craspedota sp. nov.
Cyphaspis lævis Hall.
Cyphaspis cœlebs sp. nov.
Protolimulus eriensis (Williams).
Eurypterus beecheri Hall.
Eurypterus prominens Hall.
Stylonurus excelsior Hall.
Stylonurus? (Echinocaria?) wrightianus (Dawson).
Ceratiocaris longicauda Hall.
Ceratiocaris beecheri Clarke.
Ceratiocaris? simplex Clarke.
Echinocaris punctata Hall.
Echinocaris whitfieldi Clarke.
Echinocaris condylepis sp. nov.
Echinocaris socialis Beecher.
Echinoceris pustulosa Whitfield.
Echinoceris multinodosa Whitfield.
Elymocaris capsella sp. nov.
Elymocaris siliqua Beecher.
Tropidocaris bicarinata Beecher.
Tropidocaris interrupta Beecher.
Tropidocaris alternata Beecher.
Mesothyra oceani sp. nov.
Mesothyra neptuni Hall.
Mesothyra spumæa sp. nov.
Mesothyra (Dithyrocaris?) veneris sp. nov.
Dithyrocaris belli Woodward.
Rhinocaris columbia sp. nov.
Rhinocaris scaphoptera sp. nov.
Spathiocaris emersoni Clarke.
Dipterocaris pennæ-dædali Clarke.
Dipterocaris procne Clarke.
Dipterocaris pes-cervæ Clarke.
Palæopalæmon newberryi Whitfield.
Estheria pulex Clarke.
Schizodiscus capsa sp. nov.
Protobalanus hamiltonensis sp. nov.
Palæocreusia devonica sp. nov.
Strobilepsis springera sp. nov.
Turrilepas flexuosus sp. nov.
Turrilepas devonicus Clarke.
Turrilepas cancellatus sp. nov.
Turrilepas squama sp. nov.
Turrilepas nitidulus sp. nov.
Turrilepas foliatus sp. nov.
Turrilepas tener sp. nov.
Turrilepas (?) newberryi Whitfield.
Stylonurus excelsior.

Reviewed in Am. Naturalist, XXII, 714, 1888; also in Neues Jahrbuch, 186–190, 1889; and Am. Geologist, III, 147–148, 1889.

Hall, James. Crustaceous Tracks from the Potsdam Sandstone of Port Henry, N. Y. (New York State Mus. Nat. Hist., 42nd. Ann. Rep., pp. 25–34. 1889.)

Hall, James. Descriptions of Bryozoa. (Tenth Ann. Rep. State Geologist, New York, for 1890, pp. 35–57. Albany, 1891.) A continuation of the descriptions of Bryozoa not printed in volume VI of the Paleontology of New York. The following species described by the author in various papers are here redescribed without figures:

Paleschara pertenuis.
Paleschara intercella.
Paleschara reticulata.
Paleschara variacella.
Paleschara amplectens.
Stictopora rectalinea.
Stictopora tumulosa.
Stictopora straita.
Stictopora sinuosa.
Stictopora ovata.
Stictopora incrassata.
Stictopora limata.
Stictopora subrigida.
Stictopora crenulata.
Stictopora angularis.
Stictopora recta.
Stictopora bifurcata.
Stictopora palmipes.
Stictopora granifera.
Stictopora divergens.
Stictopora permarginata.
Stictopora interstriata.
Stictopora recubans.
Stictopora subcarinata.
Semiopora bistigmata.
Prismopora dilatata.
Prismopora lata.
Ptilodictya parallela.
Ptilodictya plumea.
Thamniscus pauciramus.
Hederalla conferia.
Ptilopora straita.
Ptilopora nodosa.

Reviewed in Ann. Soc. géol. du Nord, t. XV, 123, 1888.

Hall, James. Description of Linnarssonia cnf. Pretiosa, Billings. (Trans. Roy. Soc. Canada, Vol. VII, Sec. IV, p. 55. Montreal, 1889.) A brief description of the form.

Hall, James. Genera of Paleozoic Brachiopoda. (Tenth Ann. Rept. State Geologist, New York, for 1890, pp. 15–17. Albany, 1891.) A tabulated list of Paleozoic brachiopods discussed in Paleontology of New York, Vol. VIII.

Hall, James. Genus Spirifera, and its Interrelations with the Genera Spiriferina, Syringothyris, Cyrtia and Crytina. (Bul. Geol. Soc. America, Vol. I, pp. 567, 568. New York, 1890.) A synopsis of a study of the characters and relations of the group.

Hall, James. New Genera and Species of the Family Dictyospongidæ. (Bul. Geol. Soc. America, Vol. I, pp. 22, 23. New York, 1890.) Notice, without descriptions or figures, of several new species from New York Chemung.

Hall, James. Paleontology of New York. (Nat. Hist. New York, Pal., Vol. V, Pt II, 42 pp., 14 plates. Albany, 1888.) Contains descriptions and illustrations of Pteropoda, Cephalopoda, and Annelida of the Niagara, Lower and Upper Helderberg, Hamilton and Waverly groups. The following species are described and figured, with notes:

Tentaculites minutus Hall.
Tentaculites niagarensis (Hall) var. cumberlandiæ var. nov.
Tentaculites gyracanthus Eaton.
Tentaculites elongatus (Hall).
Tentaculites acula sp. nov.
Tentaculites dexithea sp. nov.
Tentaculites scalariformis Hall.
Hyolithes centennialis Barrett.
Hyolithes heros sp. nov.
Styliola spica sp. nov.
Coleolus herzeri sp. nov.
Pharetrella gen. nov.
Pharetrella tenebrosa sp. nov.
Spirorbis cincinnatensis Miller & Dyer.
Ortonia minor Nicholson.
Ortonia conica Nicholson.
Conchicolites corrugatus Nicholson.
Tentaculites sterlingensis Meek & Worthen.
Tentaculites richmondensis Miller.
Cornulites flexuosus Hall.
Cornulites immaturus.
Cornulites incurvus Shumard.
Cornulites distans (Hall).
Cornulites clintoni Hall.

Hall, James—Continued.

Cornulites sp.?
Cornulites arcuatus (Conrad).
Cornulites proprius (Hall).
Cornulites bellastriatus Hall.
Cornulites chrysalis sp. nov.
Cornulites cingulatus sp. nov.
Cornulites tribulis sp. nov.
Orthoceras duramen Hall.
Orthoceras sceptrum Hall.
Orthoceras directum Hall.
Orthoceras dagon Hall.
Orthoceras rudens Hall.
Orthoceras expositum Hall.
Orthoceras consortale Hall.
Orthoceras indianense Hall.
Orthoceras icarus Hall.
Gomphoceras fax Hall.
Gomphoceras illænus Hall.
Gomphoceras absens Hall.
Gomphoceras eximium Hall.
Gomphoceras mitra Hall.
Gomphoceras impar Hall.
Gomphoceras cammarus Hall.
Gomphoceras gomphus Hall.
Gomphoceras crenatum Hall.
Gomphoceras plenum Hall.
Gomphoceras minum Hall.
Gomphoceras manes Hall.
Gomphoceras nasutum Hall.
Gomphoceras potens Hall.
Cyrtoceras subcompressum Hall.
Cyrtoceras jason Hall.
Cyrtoceras citum Hall.
Gyroceras nereus Hall.
Gyroceras laciniosum Hall.
Gyroceras? stebos Hall.
Trochoceras pandum, Hall.
Nautilus oriens Hall.
Nautilus hyatti Hall.
Nautilus parallelus Hall.
Nautilus (Discites) ammonis Hall.
Nautilus (Discites) marcellensis Hall.
Goniatites vanuxemi Hall.
Goniatites vanuxemi, var. nodiferus Hall.
Goniatites discoideus Hall.
Goniatites uniangularis Conrad.
Goniatites amplexus Hall.
Goniatites complantus Hall.
Goniatites sinuosus Hall.
Goniatites patersoni Hall.
Goniatites oweni Hall.
Goniatites ixion Hall.

Hall, James. Paleontology of New York, Volume VII. (Eighth Ann. Rep. State Geologist, New York, for 1889, pp. 7-24. Albany, 1889.) A brief preliminary synopsis of the report. Reviewed in Am. Jour. Sci., (3), XXXIX, 155, 1890.

Hall, James. Preliminary Notice of Newberria; a New Genus of Brachiopods, with Remarks on its Relations to Rensselaeria and Amphigenia. (Tenth Ann. Rep. State Geologist, New York, for 1890, pp. 91-98, 2 plates. Albany, 1891.) A description of the genus, with figures and descriptions of the following species:

Newberria? condoni (McChesney).
Newberria levis (Meek).
Newberria johannis (Hall).
Newberria missouriensis (Swallow).
Newberria claypolii sp. nov.

Reviewed in Neues Jahrbuch, 155, 156, 1892.

Hall, James. Suggestions Regarding the Subdivisions and Groupings of the Species usually included under the Generic Term Orthis, in accordance with External and Internal Characters and Microscopic Structure. (Bul. Geol. Soc. America, Vol. I, pp. 19-22. New York, 1890.) A suggested revision of the genus.

Hall, James. Type Specimens of Devonian Crustacea Described in Paleontology of New York, Vol. VII, in the Possession of the New York State Museum of Natural History. (Eighth Ann. Rep. State Geologist, New York, for 1889, pp. 24-27. Albany, 1889.) A list of the specimens described.

Haliserites z. Th., und ähnliche Gebilde, Ueber Palæospongia Prisca, Bornem Eophyton z. Th., Chondrites Antiguus. H. Rauff. (Neues Jahrbuch f. Min., Geol. u. Pal., 92-104. 1892.)

Hallopoda, Distinctive Characters of the Order. O. C. Marsh. (Am. Jour. Sci., (3), XXXIX, 415-417. 1890.)

Hallopus and Other Dinosaurs. G. Baur. (American Naturalist, XXIV, 569-571. 1890.)

Halzapfel, A. Annotated Check-List of the Cretaceous Invertebrate Fossils; by R. T. Hill: Geol. Sur. Texas, Bul. No. 4, 1889. Review. (Neues Jahrbuch, p. 305. 1890.)

Halzapfel, A. Cretaceous Fossils from British Columbia, the Northwest Territory, and Manitoba; by J. F. Whiteaves: Cont. Can. Pal., I, 1889. Review. (Neues Jahrbuch, pp. 158, 159. 1891.)

Halzapfel, A. Invertebrate Fossils from the Pacific Coast; by C. A. White: Bul. U. S. Geol. Sur., No. 51, 1889. Review. (Neues Jahrbuch, pp. 154–153. 1892.)

Halzapfel, A. Occurrence of Fossils of Cretaceous Age on the Islands of Marthas Vineyard, Mass.; by N. S. Shaler: Bul. Mus. Comp. Zool. XVI. Review. (Neues Jahrbuch, p. 305. 1890.)

Halzapfel, A. Paleontology of Cretaceous Formation of Texas, Part I; by R. T. Hill: Bul. Texas Univ., School Geology. Review. (Neues Jahrbuch, p. 300. 1890.)

Hambach, G. Catalogue of Fossils Occurring in Missouri. (Bul. Geol. Sur. Missouri, No. 1, pp. 60–85. Jefferson City, 1890.) A tabulated list of fossils reported from the state.

Hamilton Formation of Ontario, with List of Species at Present Known from that Formation and Province. J. F. Whiteaves. (Geol. and Nat. Hist. Sur. Canada, Contributions to Canadian Paleontology, I, 95–125. 1889.)

Hamilton Group near Iowa City, Iowa, Species of Spirifera. S. Calvin. (Bul. Lab. Nat. Hist., State Univ. Iowa, I, No. 1, 28, 29. 1888.)

Hamilton of Chenango and Ostego Counties, New York. C. S. Prosser. (Proc. Am. As. Adv. Sci., XXVI, 210. 1888.) Abstract. Various species mentioned.

Hamilton Period in Western Ontario, Vertical Range of Certain Species of Fossils. S. Calvin. (American Geologist, I, 81–86. 1888.)

Haplocrinus, Ventral Structure, and Consequent Modifications in Classification of Crinoidea. C. Wachsmuth and F. Springer. (Proc. Acad. Nat. Sci., Phila., 337–363. 1888.)

Harris, Gilbert D. Confounding of Nassa Triviata, Say, and Nassa Peralta, Conrad. (American Geologist, Vol. VIII, pp. 174–176. Minneapolis, 1891.) Notes on the confusion of the forms, with the literature of the subject.

Harris, Gilbert D. Genus Terebellum in American Tertiaries. (American Geologist, Vol. V, p. 315. Minneapolis, 1890. The occurence of this genus in the Eocene of Texas is noted.

Harris, Gilbert D. Geology of Southwestern New York. (American Geologist, Vol. VII, pp. 164–178. Minneapolis, 1891.) Incidental references to fossils.

Harris, T. W. Mount Bob, Mount Ida, on Snake Hill. (Am. Jour. Sci., (3), Vol. XLIII, pp. 236–238. New Haven, 1892.) Incidental references to fossils.

Hay, Robert. Geological Reconnaissance in Southwestern Kansas. (Bul. U. S. Geol. Sur., No. 57, 49 pp., 2 plates. Washington, 1890.) Incidental references to fossils.

Hay, Robert. New Species of Fossils Cephalopods. (Trans. Kansas Acad. Sci., Vol. XIII, pp. 37–47. Topeka, 1893.) Notes on, and republication of, descriptions by Hyatt.

Heilprin, Angelo. Eocene Mollusca of the State of Texas. (Proc. Acad. Nat. Sci., Phila., XLII, pp. 393–406, 1 plate. Philadelphia, 1890.) A list is given of the Eocene mollusca known from Texas and the following species are described and figured as new:

Natica dumblei.
Cerithium texanum.
Clavella (Fusus ?) penrosei.
Buccitriton scalatum.
Ancillaria ancillops.
Crassatella texana.

Heilprin, Angelo. Fossils of Pliocene ("Floridian") Formation of the Caloosahatchie. (Trans. Wagner Free Inst. Sci., Vol. I, pp. 68–134, 19 plates. Philadelphia, 1887.)

Heilprin, Angelo. Geological Evidences of Evolution. (One volume. Philadelphia, 1888.) References to fossil species. Reviewed in Nature, xxxviii, 50, 51. 1888.

Heilprin, Angelo. Geological Researches in Yucatan. (Proc. Acad. Nat. Sci., Phila., Vol. xliii, pp. 136–158. Philadelphia, 1891.) List of Pliocene fossils given.

Heilprin, Angelo. Geology and Paleontology of Cretaceous Deposits of Mexico. (Proc. Acad. Nat. Sci., Phila., Vol. xlii, pp. 445–469. Philadelphia, 1890.) Notes on a number of species.

Heilprin, Angelo. Miocene Mollusca of the State of New Jersey. (Proc. Acad. Nat. Sci., Phila. Vol. xxxix, pp. 397–405. Philadelphia, 1888.) A list of species is given with notes on various forms and descriptions of the following:

Murex shilohensis sp. nov.
Plerotoma pseudoburena sp. nov.
Triforis terbata sp. nov.
Pecten humphreyi var. woomani, var. nov.

Reviewed in Neues Jahrbuch, 351, 1890.

Helderberg, Chemung, and Waverly Group Fossils, found in the Collections of the Geological Survey of Pennsylvania. G. B. Simpson. (Trans. Am. Philos. Soc., xv, 435–460. 1888.)

Helderberg Limestone in North America, and "Hercyn-Frage." J. M. Clarke. (American Geologist, Vol. vii, 109–113. 1891.)

Helderberg, Lower, Beecherella, New Genus of Ostracoda. E. O. Ulrich. (American Geologist, xiii, 197–204. 1891.)

Helderberg, Lower, of New Brunswick, Fish Remains. G. F. Matthew. (American Geologist, viii, 61, 62. 1891.)

Helopora (Hall), and other Genera of that type, Sceptropora, Genus of Bryozoa. E. O. Ulrich. (American Geologist, i, 228–234. 1888.)

Hemiptera of British Columbia, Canadian Fossil Insects, i, Tertiary. S. H. Scudder. (Geol. and Nat. Hist. Sur. Canada, Cont. Canadian Pal., ii, 5–26. 1891.)

Hemiptera, Physiognomy of American Tertiary. S. H. Scudder. (Proc. Boston Soc. Nat. Hist., xxiv, 562–579. 1890.)

"**Hercyn-Frage**" and Helderberg Limestone in North America. J. M. Clarke. (American Geologist, vii, 109–113. 1891.)

Hercynian Fauna of Northern Hartz in Germany. C. D. Walcott. (Am. Jour. Sci., (3), xxxix, 155, 156. 1890.)

Hercynian Question: Brief Review of its Development and Present Status, with a few Remarks upon its Relations to the Current Classification of American Paleozoic Faunas. J. M. Clarke. (State Cab. Nat. Hist., New York, 42d Ann. Rep., pp. 408–437. 1889.)

Hercynian Question. J. M. Clarke. (Eighth Ann. Rep. State Geologist, New York, for 1889, 62–92. 1889.)

Herrick, C. L. Additions and Corrections to Miller's North American Paleontology. (American Geologist, Vol. v, pp. 253–255. Minneapolis, 1890.) A list of omitted species is given.

Herrick, C. L. Cuyahoga Shale and the Problem of the Ohio Waverly. (Bul. Geol. Soc. America, Vol. ii, pp. 31–47, 1 plate. Washington, 1891.) A list of the common fossils of the Cuyahoga shale is given. The following species are described and figured:

Phaethonides spinosus, Herrick.
Phillipsia consors, Herrick.
Phillipsia meramecensis, Shumard.
Cytherella uniformis, sp. nov.
Leptodesma nasutus, Herrick.
Leiopteria cuyahoga, sp. nov.
Conocardium alternistriatum, Herrick.
Spirifer peudolineatus, Hall.
Cypricardinia sp.
Discina magnifica, sp. nov.

Herrick, C. L. Description of Four New Species of Waverly Fossils. (Bul. Sci. Lab. Dennison Univ., Vol. iv, pp. 11–60 and 97–123. 1890.) Contains also lists of, and a consideration of, other forms.

Herrick, C. L. Geology of Licking County, Ohio, Parts III and IV, Subcarboniferous and Waverly Groups. (Bul. Sci. Lab. Dennison Univ., Vol. III, Pt. I, pp. 13–110, 12 plates. Granville, 1888.) The stratigraphy is discussed after which the paleontology of the rocks is considered and the following species described as new:

Nautilus (?) bisculatus.
Phillipsia præcursor.
Chonetes tumidus.
Orthis vanuxemi var. pulchellus.
Spirifera winchelli.
Spirifera depressa.
Aviculopecten perlongatus.
Aviculopecten granvillensis.
Aviculopecten cooperi.
Crenipecten subcardiformis.
Crenipecten senilis.
Aviculopecten (Lyriopecten) cancellatus.
Linatulina (?) ohioensis.
Streblopteria media.
Streblopteria synama.
Streblopteria gracilis.
Pterinopecten carboniferus.
Pretomites (Leptodesma) ? oblongus.
Leptodesma (?) scutella.
Posidonomata (Streblopteria) fragilis.
Promacra (?) truncatus.
Leiopteria ortoni.
Leiopteria halli.
Modiola waverleyensis.
Schizodus newarkensis.
Sanguinolites (Goniophora) senilis.
Allorisma cooperi.
Allorisma convexa.
Macodon (?) triangularis.
Nuculana (Leda) spatulata.
Nuculana (Leda) similis.
Palæoneilo ellipticus.
Palæoneilo ellipticus, var. ficatella.
Palæoneilo ellipticus, var. elegantula.
Palæoneilo ellipticus, var. allorismiformis.
Arca ornata.
Gonoidon gen. nov.
Gonoidon ohioensis.
Pleurotomaria (Cyclonema) strigillata.
Dentalium granvillensis.
Schizodus (Protoschizodus) palæoneiliformis.

Herrick, C. L. Geology of Licking County, Ohio, Part IV, Waverly Group, Continued, General Conclusions. (Bul. Sci. Lab. Dennison Univ., Vol. IV, Pt. I, pp. 97–123. Granville, 1888.) This paper is devoted to the general conclusions in regard to the Waverly Group of Ohio. In the addenda the following new species are described:

Leiopteria ? newberryi.
Avicula ? recta.
Solenomya cuyahogensis.
Schizodus harlanensis.

Reviewed in Am. Jour. Sci., (3), XXXVII, 317–318, 1889.

Herrick, C. L. Geology of Licking County, Ohio, Part IV, List of Waverly Fossils, Continued. (Bul. Sci. Lab. Dennison Univ., Vol. IV, Part I, pp. 11–60, 2 plates. Granville, 1888.) The new species are:

Lingula atra.
Lingula gannensis.
Lingula meeki.
Lingula waverleyensis.
Productus varicostatus.
Productus annosus.
Productus rushvillensis.
Productus nodocostatus.
Athyris ashlandensis.
Rhynchospira ? ashlandensis.
Spirifera (Martinia) tenuispinatus.
Spirifer deltoidens.
Allorisma cuyahoga.
Allorisma consanguinatus.
Leiopteria nasutus.
Avicula ? subspatulata.
Edmondia sulcifera.
Lyriopecten nodocostatus.
Pteriopecten ? ashlandensis.
Grammysia ovata.
Grammysia familica.
Schizodus chemungensis, var. prolongatus.
Macrodon newarkensis.
Macrodon striato-costatus.
Cypricardinia (Microdon) scitula.
Oracardia gen. nov.
Oracardia ornata.
Oracardia cornuta.

Herrick, C. L.—Continued.

Conocardium alternistriatum.
Palæoneilo consimilis.
Palæoneilo ignota.
Palæoneilo (Nucula) curta.
Flemingia stultus.
Conularia gracilis.
Phillipsia serraticaudata.
Phillipsia (?) consors.
Proetus minutus.
Phaethonides occidentalis.
Phaethonides spinosus.
Phaethonides (?) immaturus.
Cytheria ohioensis.

Reviewed in Am. Jour. Sci., (3), XXXVII, 317, 318, 1889.

Herrick, C. L. Waverly Group in Ohio. (American Geologist, Vol. III, pp. 94-99, 3 plates. Minneapolis. 1889.) Lists and figures of typical forms.

Hesperornis, Anatomy. F. A. Lucas. (Proc. Biol. Soc. Wash., VI, March. 1891.)

Heterocrinus Subcrassus, Crinoid. D. T. D. Dyche. (Science, XX, 66. 1892.)

Hicks and Salter, Classification of, How is Cambrian Divided? G. F. Matthew. (American Geologist, VI, 139, 140. 1889.) Numerous references to fossils.

Hilgard, E. W. Equivalence in Time of American Marine and Intracontinental Tertiaries. (Science, Vol. IX, No. 228, pp. 535, 536. 1889.) Incidental references.

Hill, Robert T. Check-List of Invertebrate Fossils from the Cretaceous Formations of Texas. (University of Texas, School of Geology, Circulars, 16 pp. Austin, 1889.) Notes on the geographical and geological distribution and short references to bibliography.

Hill, Robert T. Comanche Series of Texas-Arkansas Region. (Bul. Geol. Soc. America, Vol. II, pp. 503-528. Rochester. 1891.) Reference to fossils. Reviewed in American Geologist, VIII, 258, 1891.

Hill, Robert T. Events in North American Cretaceous History Illustrated in the Arkansas-Texas Division of the Southwestern Region of the United States. (Am. Jour. Sci., (3), Vol. XXXVII, pp. 282-289. New Haven, 1889.) Incidental references to the Cretaceous fauna of this region.

Hill, Robert T. Foraminiferial Origin of Certain Cretaceous Limestones and the Sequence of Sediments in North American Cretaceous. (American Geologist, Vol. VI, pp. 174-177. Minneapolis. 1889.) Description of certain Texas Cretaceous rocks made up of *Tinoporus texana*.

Hill, Robert T. Geology of the Southwest. (American Geologist, Vol. VII, pp. 366-370. Minneapolis, 1891.) Contains brief notes on the foraminifera of the Texas region.

Hill, Robert T. Macraster Texanus. (American Naturalist, Vol. XXIII, p. 168. Philadelphia, 1889.) A brief note on the species, with reference to a description of it by Ferdinand Rœmer in Neues Jahrbuch, I. Band, drittes Heft.

Hill, Robert T. Neozoic Geology of Southwestern Arkansas. (Geol. Sur. Arkansas, Ann. Rep. 1888, Vol. II, pp. 127-152. Little Rock, 1889.) In the chapter on the paleontology of Trinity division the following species are described and figured:

Ammonites walcotti sp. nov.
Pleurocera strombiformis, Schloth.
Vivipara cossatotensis, sp. nov.
Buccinapsis? conradi, sp. nov.
Ostrea franklini, Coguand.
Arca gratiota, sp. nov.
Arca parva, var. missouriensis, var. nov.
Cyrena arkansensis, sp. nov.
Corbicula pikensis, sp. nov.
Cardium? sevierensis, sp. nov.

Reviewed in Am. Geologist, VI, 243-246, 1888; also Am. Jour. Sci., (3), XXXVIII, 413, 414, 1889.

Hill, Robert T. Paleontology of Cretaceous Formations of Texas, Part I. (University of Texas, School of Geology, Circulars, 8 pp. Austin, 1889.) The following species from the Shoal Creek (Vola) limestone series described:

Pecten (Vola) roemeri, sp. nov.
Peterocera shumardi, sp. nov.

Reviewed in Neues Jahrbuch, 300, 1890.

Hill, Robert T. Preliminary Annotated Check-List of the Cretaceous Invertebrate Fossils of Texas. (Geol. Sur. Texas, Bul. No. 4, 57 pp. Austin, 1889.) Brief notes on the localities of the species with tables showing stratigraphical range. Reviewed in Am. Geologist, VI, 124, 1890; also Am. Jour. Sci., (3), XXXIX, 521, 1890; and in Neues Jahrbuch, 303, 1890.

Hill, Robert T Reconnaissance of the Ouachita Mountain System in Indian Territory. (Am. Jour. Sci., (3), Vol. XLII, pp. 111-124. New Haven, 1891.) Numerous references to fossils found.

Hill, Robert T. Ueber eine durch Häufigkeit hippuritenartiger Chamiden ausgezeichnete Fauna der oberturonen Kreide von Texas, von Ferdinand Roemer in Breslau; Pal. Abhand., IV. Band, Heft 4. Berlin, 1888. Review. (Am. Jour. Sci., (3), Vol. XXXVII, pp. 318, 319. New Haven, 1889.) Critical review of the work and reference of the fauna to the Hippurite limestone of Shumard, rather than the upper Turonian.

Hill, Robert T. Validity of three Species of Cephalopods described by Schlüter in the Niederrhein, Gesellschaft at Bonn, March, 1887. Criticism. (American Naturalist, Vol. XXIII, p. 169. Philadelphia, 1889.) A brief note.

Hill, Robert T., and R. A. F. Penrose, jr. Uppermost Cretaceous Beds of Eastern and Southern United States; and Tertiary Cretaceous Partings of Arkansas and Texas. (Am. Jour. Sci., (3), Vol. XXXVIII, pp. 468-473. New Haven, 1889.) Contains references to characteristic fossils.

Hindeastræa, a New Generic Form of Cretaceous Astræidæ. C. A. White. (Geol. Mag., (3), V, 362, 363. 1889.)

Hinde, G. J. Archæocyathus, Billings, and other Genera Allied thereto or Associated therewith from Cambrian Strata of North America, Spain, Sardinia and Scotland. (Canadian Rec. Sci., Vol. III, pp. 373, 374. Montreal, 1889.)

Hinde, G. J. Archæocyathus, Billings, and other Genera Allied to or Associated with it for the Cambrian Strata of North America, Spain, Sardinia and Scotland. (Quart. Jour. Geol. Soc., London, Vol. XLV, pp. 125-148, 1 plate. London, 1889.) The three species included by Billings in Archæocyathus are shown to belong to three genera: *A. profundus*, *Spirocyathus* (*n. gen.*) *atlanticus*, while the third proves to be a silicious sponge *Archæosoyphia* (n. gen.) *minganensis*. "The Archæocyathinæ are regarded as a special family of the Zoantharia sclerodomata, in some features allied to the group of perforate corals." *Calathium* (*?*) *paradoxicum*, Billings is referred to Nipterella (n. gen.) a Lithistid sponge. "The Genera Calathium, Bill., and Trichospongia, Bill., are also undoubted silicious sponges." Reviewed by H. Rauft, Neues Jahrbuch, 197-199, 1891; also Am. Jour. Sci., (3), XXXVII, 234, 1889.

Hinde, G. J. Chert and Silicious Schists of Permo-Carboniferous Strata of Spitzbergen and on Characters of Sponges which have been described by Dr. E. von Dunikowski. (Geological Magazine, (3), Vol. V, p. 24. London, 1888.) Incidental references.

Hinde, G. J. Silicious Sponges from Trenton Formation of Ottawa. (Can. Rec. Sci., Vol. III, pp. 395-399. Ottawa, 1889.) The following are described:

Steliella billingsi.
Steliella crassa.

Reviewed in Ottawa Naturalist, III, No. 3, 1889; also Neues Jahrbuch, 341, 1891.

Hinde, G. J. Spicules Described by Billings in Connection with Structure of Archæocyathus Minganensis. (Geological Magazine, (3), Vol. V, No. 2, pp. 226-228. London, 1888.) Reviewed in Am. Geologist, II, 128, 1888.

Hinde, G. J., J. W. Dawson and. New Species of Fossil Sponges from Little Metis, Province of Quebec, Canada. (Peter Redpath Mus., McGill Univ., pp. 49-68. 1888.)

Hinde, G. J., J. W. Dawson and. Sponges from Little Metis, Province of Quebec, Canada. (Canadian Rec. Sci., vol. III, pp. 49-68 Ottawa, 1888.) Several species described as new.

Hippotherium and Rhinoceras from Florida. J. Leidy. (Proc. Acad. Nat. Sci., Phila., XLII, 182, 183. 1890.)

Hippotherium, Review of North American Species. E. D. Cope. (Proc. Am. Philos. Soc., XXVI, 429–458. 1889.)

Hollick, Alfred. Paleontology of Cretaceous Formation on Staten Island. (Trans. N. Y. Acad. Sci., vol. XI, pp. 96–103, plates 1–4. New York. 1892.)

Homologies of Cranial Arches of Reptilia. E. D. Cope. (American Naturalist, XXVI, 407, 408. 1892.)

Homologies of Posterior Cranial Arches in Reptilia. E. D. Cope. (Trans. Am. Philos. Soc., XVII, 942–944. 1892.)

Horizon, New, of Fossil Fishes. E. D. Cope. (Proc. Am. As. Ad. Sci., XL, 285. 1892.) Abstract.

Horizons, Correlation of Lower Silurian of Tennessee and of the Ohio and Mississippi Valleys, with those of New York and Canada. E. O. Ulrich. (American Geologist, II, 39–44. 1888.) Various species of fossils referred to.

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Horned Dinosauria from Cretaceous. O. C. Marsh. (Am. Jour. Sci., (3), XXVI, 477, 478. 1888.)

Horned Dinosauria of Laramie. [E. D. Cope.] (American Naturalist, XXIII, 715–717. 1889.)

Horses and other Mammals, Professor Marsh on Extinct. E. D. Cope. (American Naturalist, XXVI, 410–412. 1892.)

Horses, Dentition, Permanent and Temporary of Certain Three-toed. E. D. Cope. (American Naturalist, XXVI, 942–944. 1892.)

Horses, Permanent and Temporary Dentition of Certain Three-toed. E. D. Cope. (Proc. Acad. Nat. Sci., Phila., XLIV, 325, 326. 1892.)

Horses, Recent Polydactyle. O. C. Marsh. (Am. Jour. Sci., (3), XLIII, 339–354. 1892.)

Howley, James P. Taconic of Eastern Newfoundland. (American Geologist, Vol. IV, pp. 121–125. Minneapolis, 1889.) Incidental reference to Cambrian forms.

Hubbard, George C. Cystidians of Jefferson County, Indiana. (Proc. Indiana Acad. Sci., p. 67. Brookville, 1891.) A short notice of the manner of their occurrence.

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Hudson, River "Fiord." A. M. Edwards. (Am. Jour. Sci., (3), XLIII, 182, 183. 1892.)

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"**Hudson River** Group" in Geologic Nomenclature, Value of Term. C. D. Walcott. (Bul. Geol. Soc. America, I, 335–356. 1890.) Incidental references to fossils.

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Hutchinson, H. N. Extinct Monsters. (One volume, 354 pp. New York, 1892.) A popular account of some of the larger ancient marine forms.

Hyæna and other Carnivora from Texas. E. D. Cope. (Proc. Acad. Nat. Sci., Phila., XLIV, 326, 327. 1892.)

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Hyatt, Alpheus. Carboniferous Cephalopods. (Texas Geol. Sur., Second Ann. Rept., pp. 327-356. Austin, 1890.) The following described:

Temnochilus conchiferus sp. nov.
Temnochilus forbesianus (McC.).
Temnochilus latus M. & W.
Temnochilus depressus sp. nov.
Temnochilus crassus sp. nov.
Metacoceras cavatiformis sp. nov.
Metacoceras dubium sp. nov.
Metacoceras walcotti sp. nov.
Metacoceras hayi sp. nov.
Metacoceras inconspicuum sp. nov.
Tainoceras cavatum sp. nov.
Domatoceras gen. nov.
Domatoceras multicatum sp. nov.
Asymptoceras newloni sp. nov.
Phacoceras dumblei sp. nov.
Ephoppiceras divisium W. & St. J.
Endolobus gibbosus sp. nov.
Gastrioceras compressum sp. nov.

Reviewed in American Geologist, VIII, 187, 1891.

Hyatt, Alpheus. Evolution of Fauna of the Lower Lias. (Proc. Boston Soc. Nat. Hist., Vol. XXIV, pp. 17-30. Salem, 1888.) A short abstract from the author's monograph on the Arietidæ, treating of their geological and faunal relations.

Hyatt, Alpheus. Genesis of Arietidæ. (Mem. Mus. Comp. Zool., Vol. XVI, No. 3, pp. i-xi, 1-238, 14 plates. Cambridge, 1889.) Published also in Smithsonian Contributions to Knowledge.

Hyatt, Alpheus. Genesis of the Arietidæ. (Smithsonian Contributions to Knowledge, Vol. XXVI, No. 637, 238 pp., 14 plates. Washington, 1889.) A study of the genesis of the group, with the geological and faunal relations. Contains descriptions and figures of numerous European and the following American forms:

Arnioceras? nevadanum (Gabb).
Arnioceras humboldti sp. nov.

Reviewed in American Naturalist, XXIV, 557-562, 1840.

Hyatt, Alpheus. Values in Classification of the Stages in Growth and Decline, with Propositions for a New Nomenclature. (American Naturalist, Vol. XXII, pp. 872-884, 1 plate. Philadelphia, 1888.) Special reference is made to the fossil cephalopods. Published also in abstract in Proc. Boston Soc. Nat. Hist., XXIII, 45. Reviewed in Science, XI, 41, 42, 1888.

Hydroids.

Goniograptus from Levis Formation, Levis, Quebec. H. M. Ami. (Canadian Rec. Sci., III, 424-428. 1889.)

Goniograptus Thureani McCoy, from Levis Formation, Canada. H. M. Ami. (Canadian Rec. Sci., III, 502, 503. 1889.)

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Silurian Graptolites from Northern Maine. W. W. Dodge. (Am. Jour. Sci., (3), XL, 153-155. 1890.)

Hydrozoa. (*See* Hydroids.)

Ichthyic Fauna, Silurian, and its Mode of Occurrence. C. D. Walcott. (Bul. Geol. Soc. America, III, 153-172. 1891.) Abstract.

Illinois.

Bryozoa, Paleozoic. E. O. Ulrich. (Geol. Sur. Illinois, VIII, 283-688. 1890.) Descriptions of new species.

Carboniferous Rocks of Mississippi Valley, Classification. C. R. Keyes. (Pamphlet, 1-24. 1892.)

Catalogue of Fossil Cephalopods in British Museum, Part I, Nautiloidea. A. H. Foord. (One volume, pp. i-xxxi and 1-344. London, 1888.)

Color, Preservation in Fossil Shells. C. R. Keyes. (The Nautilus, IV, 30, 31. 1890.)

Conularia Missouriensis, Swallow, with Crenulated Costæ. S. Calvin. (American Geologist, V, 207, 208. 1890.)

Illinois—Continued.

- **Drift Deposits of Illinois.** A. H. Worthen. (Geol. Sur. Illinois, viii, 1-24. 1890.) Cretaceous fossils figured from the drift deposits of Illinois, Iowa, and Missouri.
- **Edestes,** Structure and Relations, with a Description of Gigantic New Species. J. S. Newberry. (Ann. N. Y. Acad. Sci., iv, 113-122. 1888.)
- **Fishes,** Character of Paleozoic. E. D. Cope. (Proc. U. S. Nat. Mus., xiv, 447-463. 1892.)
- **Fishes,** Paleozoic of North America. J. S. Newberry. (U. S. Geol. Sur., Mon. xvi, 340 pp. 1889.)
- **Fossil** of Puma. J. Leidy. (Proc. Acad. Nat. Sci., Phila., xl, 9, 10. 1888.)
- **Fossil** Spider, Arthrolycosa Antiqua Harger. C. E. Beecher. (Am. Jour. Sci., (3), xxxviii, 219-223. 1889.)
- **Index,** General, to Geological Survey of Illinois, Volumes i-viii. Josua Lindahl. (Geol. Sur. Illinois, viii, Appendix, 39-153. 1890.)
- **Invertebrates,** Fossil. A. H. Worthen. (Geol. Sur. Illinois, viii, 71-157. 1890.) A number of species described as new from the Paleozoic.
- **Lingulasma:** New Genus and Eight New Species of Lingula and Trematis. E. O. Ulrich. (American Geologist, iii, 377-391. 1889.)
- **Local** Deposits of Chester Sandstone. J. M. Nickels. (American Geologist, vii, 47, 48. 1891.) Occurrence of characteristic fossils noted.
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- **Paleontological** Notes. A. S. Packard. (Proc. Boston Soc. Nat. Hist., xxiv, 209-216. 1889.)
- **Paleontology** of Indiana. S. A. Miller. (Geol. Sur. Indiana, 18th Ann. Rep., Paleontology, 79 pp. 1892.) Advance sheets.
- **Rhizodus** from St. Louis Limestone at Alton, Ill. J. S. Newberry. (Trans. N. Y. Acad. Sci., vii, 165. 1888.)
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- Portions of Castoroides Ohioensis not heretofore Known. J. Moore. (Proc. Am. As. Adv. Sci., XXXIX, 265-267. 1891.) Abstract.
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Acervularia Profunda, Hall, and Acervularia Davidsoni, Edwards and Haime, Differences. S. Calvin. (American Geologist, ix, 355-358. 1892.)

Age of Certain Sandstones near Iowa City. C. R. Keyes. (Proc. Iowa Acad. Sci., i, Pt. ii, 25. 1892.)

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Bryozoa, Paleozoic. E. O. Ulrich. (Geol. Sur. Illinois, viii, 283-688. 1890.) Descriptions of new species.

Iowa—Continued.

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Carboniferous, Stratigraphy in Central Iowa. C. R. Keyes. (Bul. Geol. Soc. America, II, 277–292. 1891.) Incidental references to fossils.

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Cretaceous Deposits of Iowa. C. A. White. (American Geologist, I, 221–227. 1888.) Various species of fossils referred to.

Cretaceous in Iowa, Eastern Extension. C. R. Keyes. (Proc. Iowa Acad. Sci., I, Pt. II, 21. 1892.)

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Cuboides Zone and Its Fauna; A discussion of Methods of Correlation. H. S. Williams. (Bul. Geol. Soc. America, I, 481–500. 1890.)

Devonian, Conocardium. C. R. Keyes. (Proc. Iowa Acad. Sci., I, Pt. II, 23, 24. 1892.)

Devonian Fauna of Iowa, Relation. H. S. Williams. (American Geologist, III, 230–233. 1889.)

Devonian Fossils from Iowa. C. R. Keyes. (Proc. Acad. Nat. Sci., Phila., 1888, 247–249. 1888.)

Devonian Rocks of Buchanan County, Iowa. S. Calvin. (American Geologist, VIII, 142–145. 1891.) Numerous references to fossils.

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Geology of Johnson County, Iowa. C. L. Webster. (American Naturalist, XXII, 408-419. 1888.) Incidental references to fossils.

Hamilton Group, Spirifera, near Iowa City, Iowa. S. Calvin. (Bul. Lab. Nat. Hist. State Univ. Iowa, I, No. 1, 28, 29. 1888.)

Helicina Occulta, Distribution. C. R. Keyes. (The Nautilus, III, 18, 19. 1889.)

Invertebrates, Fossil. A. H. Worthen. (Geol. Sur. Illinois, VIII, 71-154. 1890.) A number of species described as new from the Paleozoic.

Keokuk Beds and their Contained Fossils in Vicinity of Keokuk, Iowa. C. H. Gordon. (Proc. Iowa Acad. Sci., I, 98-100. 1890.) Abstract.

Keokuk Group of Mississippi Valley. C. S. Beachler. (American Geologist, X, 88-96. 1892.) Incidental references to fossils.

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Maquoketa Shales and their Correlation with Cincinnati Group of Southwestern Ohio. J. F. James. (American Geologist, V, 335-236. 1890.)

Maquoketa Shales in Iowa. J. F. James. (Proc. Am. As. Adv. Sci., XXXVIII, 250,251. 1890.) Reference made to various species.

Mississippian Section, Principal. C. R. Keyes. (Bul. Geol. Soc. America, III, 283-300. 1892.)

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Paleontology of New York. J. Hall and J. M. Clarke. (Nat. Hist. New York, Pal., VII, 236 pp. 1888.)

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Quaternary Section Eight Miles Southeast of Des Moines, Iowa. C. R. Keyes and R. E. Call. (Proc. Iowa Acad. Sci., i Pt. ii, 30. 1892.)

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Revision and Monograph of Genus Chonophyllum. W. H. Sherzer. (Bul. Geol. Soc. America, iii, 253-282. 1892.)

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Rockford Shales of Iowa, Fossils. C. L. Webster. (American Naturalist, xxii, 1013-1018. 1888.) Description of new species.

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Straparollus from Southeastern Iowa. C. R. Keyes. (American Geologist, v, 193-197. 1890.)

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James, Joseph F. Fauna of Lower Cambrian or Olenelus Zone. (American Geologist, Vol. viii, pp. 82-86. Minneapolis, 1891.) A full critical review of an article by C. D. Walcott, bearing the same title, published in the Tenth Annual Report of the U. S. G. S.

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J[ames], J[oseph] F. List of Writings of U. P. Jones. (American Geologist, Vol. iii, pp. 285-287. Minneapolis, 1889.) Mention made of several papers.

James, Joseph F. Maquoketa Shales and their Correlation with the Cincinnati Group of Southwestern Ohio. (American Geologist, Vol. v, pp. 335-356. Minneapolis, 1890.) List and references to fossil forms, with notes on certain species.

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James, Joseph F. Monticulipora a Coral and not a Polyzoon. (American Geologist, Vol. I, pp. 386–392. Minneapolis, 1888.) Sets forth arguments supporting the belief that the organisms in question have been wrongly referred to Bryzoans heretofore.

James, Joseph F. Monticuliporid Corals of the Cincinnati Group, with a Critical Revision of the Species. (Proc. Am. As. Adv. Sci., Vol. XXXVI, p. 223. Salem, 1888.) Abstract of a paper published in the Jour. Cincinnati Soc. Nat. Hist.

James, Joseph F. Nomenclature of some Cincinnati Group Fossils. (American Geologist, Vol. I, p. 333. Minneapolis, 1888.)

James, Joseph F. Section of the Maquoketa Shales in Iowa. (Proc. Am. As. Adv. Sci., Vol. XXXVII, pp. 250, 251. Salem, 1890.) Abstract. A detailed section, with lists of the fossils found.

James, Joseph F. Sections of Fossils. (Science, Vol. XI, p. 50. New York, 1888.) Objects to the use of sections on the principle that internal characters are misleading.

James, Joseph F. Studies in Problematic Organisms—The Genus Scolithus. (Bul. Geol. Soc. America, Vol. III, pp. 32–44. 1892.)

James, Joseph F. Variation, with Special Reference to Certain Paleozoic Genera. (American Naturalist, Vol. XXIII, pp. 1071–1087. Philadelphia, 1889.) The author begins by giving an account of certain examples showing variations of species. Calls attention to the excessive multiplication of species in paleontology. Special reference is made to certain Silurian fossils of southwestern Ohio.

James, Joseph F., U. P. James and. Monticuliporid Corals of Cincinnati Group with a Critical Revision of the Species. (Jour. Cin. Soc. Nat. Hist., X–XI, 118–141, 158–184, 15–48. 1887–1888.)

James, U. P., and Joseph F. James. Monticuliporid Corals of Cincinnati Group, with a Critical Revision of the Species. (Jour. Cin. Soc. Nat. Hist., Vols. X–XI, pp. 118–141, 158–184, 15–48, 2 plates. Cincinnati, 1887–1888.) Of the thirty-four genera of the monticuliporid corals but two genera and three subgenera are recognized. These are Monticulipora, Dekayia, Conestellaria, Fistulipora and Ceramopora. Sixty species of Monticulipora and four of Ceramopora are recognized and described. *Monticulipora hospitalis* var. *neglecta* is regarded as new. Reviewed in Am. Geologist, I, 39–60, 1888; also Am. Naturalist, XXII, 165, 166, 1888.

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Jaekel, O. Carboniferous Echinodermata of Mississippi Valley; by C. R. Keyes: Am. Jour. Sci., (3), 1889. Review. (Neues Jahrbuch, 185, 186. 1892.)

Jaekel, O. Devonian Fishes of Scaumenca Bay and Campbelltown in Canada; by R. H. Traquair: Geological Magazine, VIII, 1890. Review. (Neues Jahrbuch, pp. 438, 439. 1890.)

Jaekel, O. Fossil Fish Spines named Cœlorhynchus, Agassiz; by A. Smith Woodward: Ann. Mag. Nat. Hist., 1888. Review. (Neues Jahrbuch, p. 155. 1891.)

Johnson, C. W., H. A. Pilsbry and. Catalogue of Fissurellidæ of United States. (The Nautilus, V, 102–107. 1892.)

Johnson, Lawrence C. "Grand Gulf" formation of the Gulf States. (Am. Jour. Sci., (3), Vol. XXXVIII, pp. 213–216. New Haven, 1889.) Incidental references to fossils contained in the formation.

Jones, T. Rupert. Contributions to Canadian Micro-Paleontology. (Geol. and Nat. Hist. Sur. Canada, Micro-Paleontology, Part III, pp. 59–100, 4 plates. Montreal, 1891.) Contains descriptions of the following Ostracods from the Cambro-Silurian and Devonian rocks of Canada:

Aparchites mundulus sp. nov.
Aparchites tyrrelli sp. nov.
Primitia logani (Jones).
Primitia mundula, var. effussa var. nov.
Primitia mundula, var. incisa var. nov.

Jones, T. Rupert—Continued.

Beyrichia clavigera sp. nov.
Beyrichia clavigera, var. clavifracya var. nov. sp.
Beyrichia quadrifida sp. nov.
Isochilina ottawa, var. intermedia var. nov.
Isochilina whiteavesi sp. nov.
Isochilina amii sp. nov.
Isochilina labellosa sp. nov.
Leperditia balthica, var. primæva var. nov.
Leperditia sp.
Leperditia (?) obscura sp. nov.
Primitia mundula Jones.
Beyrichia æquilatera Hall.
Beyrichia turberculata Kloeden.
Beyrichia tuberculata, var. pustulosa (Hall).
Beyrichia tuberculata, var. strictispiralis var. nov.
Beyrichia tuberculata, var. noetlingi Reuter.
Isochilina grandis, var. latimarginata var. nov.
Leperditia balthica, var. guelphica var. nov.
Leperditia hisingeri Schmidt.
Leperditia hingeri, var. fabulina var. nov.
Leperditia hingeri, var. gibbera var. nov.
Leperditia hinguri, var. egena var. nov.
Leperditia alta (?) Hall.
Leperditia phaseolus (Hisinger).
Leperditia phaseolus. var. guelphica var. nov.
Leperditia marginata Schmidt.
Leperditia whiteavesi sp. nov.
Leperditia cæca sp. nov.
Leperditia selwynii sp. nov.
Aparchies mitis sp. nov.
Primitia scitula sp. nov.
Isochilina bellula sp. nov.
Isochilina dawsoni sp. nov.
Elpe tyrellii sp. nov.
Leperditia (?) exiguus nov.
Ulrichia conradi Jones.
Primitiopsis punctulifera (Hall).
Kirkbya (?) walcotti (Jones).

Reviewed in Neues Jahrbuch, 581, 582, 1892.

Jones, T. Rupert. Devonian and Silurian Ostracoda from North America, France and the Bosphorus. (Quart. Jour. Geol. Soc., London, Vol. XLIV, pp. 534-556, 2 plates. London, 1890.) The new American species are:

Primitia clarkei.
P (?) walcotti.
Beyrichia sub-quadrata.
B. kolmoclini.
Rollia bilobata.
R. hindei.
Strepula plantaria.
Octonaria linnarissoni.
Moorea kirbyi.
Ulrichia condari, gen. et. sp. nov.

Jones, T. Rupert. Paleozoic Bivalve Entomostraca: North American Species. (Ann. and Mag. Nat. Hist., Vol. III, pp. 154. 1889.) Primitia scaphoides described as new. Reviewed in Ottawa Naturalist, III, No. 2, 1889.

Jones, T. Rupert. Paleozoic Ostracoda from North America, Wales and Ireland. (Quart. Jour. Geol. Soc. London, Vol. XLVI, pp. 2-31, 4 plates London, 1890.) The new species are:

Primitia ulrichi.
P. Whitfieldi.
Entomis rhomboidalis.
Strepula spinoidalis.
Beyrichia hallii.
B. clarki.
B. hamiltonensis.
Isochilina lineata.
I. (?) fabacea.
Leperditia claypoli.

A number of American species are referred to other genera than that of their authors. Reviewed in Neues Jahrbuch, 334, 335. 1891.

Jones, T. Rupert. Paleozoic Ostracoda from Pennsylvania, U. S. (American Geologist, Vol. VI, pp. 337-342. Minneapolis, 1889.) The following species are described and figured:

Primitia mundala.
Klœdenia simplex.
Bythocypris favulosa.
Bollia ungulata.
Primitia pennsylvanica.
Bathyocypris oviformis.
Leperditia subquarta.
Klœdenia pennsylvanica.

Reviewed in Neues Jahrbuch, 335, 1891.

ones, T. Rupert, and J. W. Kirby. Ostracoda from Mabou Coal Field of Nova Scotia. (Geological Magazine, Dec. iii, Vol. VI, pp. 269–271. London, 1889.) Following are described:

Carbonia fabulina.
Carbonia fabulina, var. altilis.
Carbonia (?) bairdioides.

Fish scales and Anthracomyas also considered.

Reviewed in Ottawa Naturalist, III, No. 3, 1889.

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Aucella, with Special Reference to its Occurrence in California. C. A. White. (U. S. Geol. Sur., Mon. XIII, 226–233. 1888.)

Biological and Geological Significance of Closely Similar Fossil Forms. C. A. White. (Proc. Am. As. Adv. Sci., XXXIX, 239–243. 1891.)

Classification of Dyas, Trias, and Jura in Northwest Texas. J. Marcou. (American Geologist, X, 369–377. 1892.) Allusions to various species of fossils.

Dinosauria, New American. O. C. Marsh. (Am. Jour. Sci., (3), XXXVIII, 331–336. 1889.)

Dinosaurian Reptiles, Description. O. C. Marsh. (Am. Jour. Sci., (3), XXXIX, 81–86. 1890.)

Distinctive Characters of Order Hallopoda. O. C. Marsh. (Am. Jour. Sci., (3), XXXIX, 415–417. 1890.)

Faunas, Relations of American and European. J. W. Gregory. (Bul. Geol. Soc. America, III, 101–108. 1892.)

Footprints from Jura-Trias of New Jersey. J. Eyerman. (Proc. Acad. Nat. Sci., Phila., XLI, 32, 33. 1889.)

Geology of Nicaragua. J. Crawford. (Proc. Am. As. Adv. Sci., XL, 261–270. 1892.) Various species mentioned.

Goniopholis in Jurassic of Colorado. E. D. Cope. (American Naturalist, XXII, 1106, 1107. 1888.)

Gryphæa Pitcheri, Morton, Original Locality. J. Marcou. (American Geologist, III, 188–193. 1889.)

Jura, Necomian and Chalk of Arkansas. J. Marcou. (American Geologist, IV, 357–367. 1889.) Various species of fossils referred to.

"Mesozoic Mammalia," Reply to Professor Marsh's Note. H. F. Osborn. (Proc. Am. As. Adv. Sci., XL, 290. 1892.) Abstract.

North American Mesozoic. C. A. White. (Proc. Am. As. Adv. Sci., XXXVIII, 205–226. 1890.)

North American Mesozoic. C. A. White. (Science, XIV, 160–166. 1889.)

Restoration of Ciasaurus and Ceratosaurus. O. C. Marsh. (Am. Jour. Sci., (3), XLIV, 343–349. 1892.)

Restoration of Stegosaurus. O. C. Marsh. (Am. Jour. Sci., (3), XLII, 189–191. 1891.)

Sauropoda and other New Dinosaurs from Potomac Formation. O. C. Marsh. (Am. Jour. Sci., (3), XXXV, 89–94. 1888.) Several forms described as new.

ura, Necomian and Chalk of Arkansas. J. Marcou. (American Geologist, IV, 257–267. 1889.) Various species of fossils referred to.

ura in Northwest Texas, Classification of Dyas, Trias. J. Marcou. (American Geologist, X, 369–377. 1892.) Allusions to various species of fossils.

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Beiträge zur Kenntniss der Gattung Protosphyræna, Leidy. J. Felix. (Zeitsch. der Deut. geol. Gesellsch., XLII. Band, Heft 2, 278–303. 1890.)

Carboniferous Cephalopods. A. Hyatt. (Texas Geol. Sur., Second Ann. Rept., 327–356. 1890.)

Characters of Ceratopsidæ, with Notice of New Cretaceous Dinosaurs. O. C. Marsh. (Am. Jour. Sci., (3), XXXIX, 418–426. 1890.)

Kansas—Continued.

Cheyenne Sandstone and Necomian Shales of Kansas. F. W. Cragin. (American Geologist, VI, 233–238. 1890.) Incidental references to fossils.

Cheyenne Sandstone and Necomian Shales. F. W. Cragin. (American Geologist, VII, 23–33, and 179–181. 1891.) Occurrence of characteristic fossils noted.

Cretaceous Echinoidea of North America, Revision. W. B. Clark. (Johns Hopkins Univ. Circulars, No. 87, 75–77. 1891.)

Geological Notes on Region South of the Great Bend of the Arkansas. F. W. Cragin. (Bul. Washburn College Lab. Nat. Hist., II, 33–37. 1889.) Incidental references to fossils.

Geological Reconnaissance in Southwestern Kansas. R. Hay. (U. S. Geol. Sur., Bul. No. 57, 49 pp. 1890.) Incidental references to fossils.

Interesting Food Habit of the Pleisiosaurs. S. W. Williston. (Trans. Kansas Acad. Sci., XIII, 121, 122. 1893.)

Llama Remains from Colorado and Kansas. F. W. Cragin. (American Geologist, IX, 257–260. 1892.)

Mammoth Remains in Franklin County, Kansas. O. C. Charlton. (Trans. Kansas Acad. Sci., XII, 74. 1890.)

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Plains, Paleontology. F. W. Cragin. (Bul. Washburn College Lab. Nat. Hist., II, 65–68. 1889.)

Pleisiosaur from Niobrara Cretaceous of Kansas. S. W. Williston. (Kansas Acad. Sci., XII, 1–5. 1890.)

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Species of Fossil Cephalopods. R. Hay. (Trans. Kansas Acad. Sci., XIII, 27–47. 1893.)

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Tiger and Loop Fork Tertiary of Kansas. F. W. Cragin. (Science, XIX, 17. 1892.)

Trilobites, Genera and Species of North American Carboniferous. A. W. Vodges. (Ann. N. Y. Acad. Sci., IV, 69–105. 1888.)

Ueber einige fossile Knochenfische aus der mittleren Kreide von Kansas. A. R. Croop. (Palæontographica, XXXIX, 107. 1892.)

Karsch, F. Fossil Cockroaches from Older American Rocks; by S. H. Scudder: Proc. Acad. Nat. Sci., Phila., 1885. Review. (Neues Jahrbuch, pp. 340, 341. 1888.)

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ayser, E. Geological Survey of the State of New York, Paleontology VII, Supplement to V, ii; by J. Hall and John M. Clarke. Review. (Neues Jahrbuch, 186–190. 1889.)

yser, E. Illustrations of Fauna of St. John Group; by G. F. Matthew: Trans. Roy. Soc. Canada, 1887. Review. (Neues Jahrbuch, 309. 1889.)

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okuk Group at Crawfordsville, Indiana. C. S. Beachler. (American Geologist, II, 407–412. 1888) Mention made of different species.

Keokuk Group of Mississippi Valley. C. S. Beachler. (American Geologist, x, 88–96. 1892.) Incidental references to fossils.

Keokuk Species of Agaricocrinus. C. H. Gordon. (Proc. Iowa Acad. Sci., I, 100, 101. 1890.) Abstract.

Keokuk Species of Agaricocrinus, Observations. C. H. Gordon. (American Geologist, v, 257–261. 1893.)

Kentucky.

Bryozoa, Paleozoic. E. O. Ulrich. (Geol. Sur. Illinois, VIII, 283–688. 1890.) Descriptions of new species.

Cincinnati Group, Manual of the Paleontology. J. F. James. (Jour. Cincinnati Soc. Nat. Hist., Pt. I, XIV, 45–72; Pt. II, XIV, 149–163; Pt. III, XV, 88–100; Pt. IV, XV, 144–159. 1891, 1892.)

Fishes, Paleozoic of North America. J. S. Newberry. (U. S. Geol. Sur., Mon. XVI, 340 pp. 1889.)

Fossils, Species and New Structural Parts. S. A. Miller and C. Faber. (Jour. Cincinnati Soc. Nat. Hist., XV. 1892.)

Geology and Paleontology, North American. S. A. Miller. (One volume, 644 pp. Cincinnati, 1890.) New species described.

Lamellibranchiata, New. E. O. Ulrich. (American Geologist, v, 270–275. 1890.)

Lamellibranchiata, Silurian, Chiefly from Minnesota Rocks. E. O. Ulrich. (Geol. and Nat. Hist. Sur. Minnesota, Nineteenth Ann. Rep., 211–248. 1892.)

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Lingulasma: New Genus and Eight New Species of Lingula and Trematis. E. O. Ulrich. (American Geologist, IV, 21–25. 1889.)

Micro-Paleontology of Cambro-Silurian Rocks of Canada. A. H. Foord. (Geol. and Nat. Hist. Sur. Canada, Contrib. to Micro-Pal., 26 pp. 1893.)

Niagara Group, Two New Genera and Eight New Species of Camerate Crinoids. C. Wachsmuth and F. Springer. (American Geologist, x, 135–144. 1892.)

Ostracoda, Lower Silurian, No. 1. E. O. Ulrich. (American Geologist, x, 263–270. 1892.)

Paleontology of Indiana. S. A. Miller. (Geol. Sur. Indiana, 18th Ann. Rep., Paleontology, 79 pp. 1892.) Advance sheets.

Paleontology of New York. J. Hall. (Nat. Hist. New York, Pal., v, Pt. II, 278 pp. 1888.)

Paleontology of New York. J. Hall and J. M. Clarke. (Nat. Hist. New York, Pal., VII, 236 pp. 1888.)

Revision and Monograph of Genus Chonophyllum. W. H. Sherzer. (Bul. Geol. Soc. America, III, 253–282. 1892.)

Sponges, New Lower Silurian. E. O. Ulrich. (American Geologist, III, 233–248. 1889.)

Sponges of Devonian and Carboniferous Systems. E. O. Ulrich. (Geol. Sur. Illinois, VIII, 243–251. 1890.) Description of new species.

Trilobites, Genera and Species of North American Carboniferous. A. W. Vogdes. (Ann. N. Y. Acad. Sci., IV, 69–105. 1888.)

Kentucky. Fossil shells from Silurian and Devonian Rocks of Kentucky: Geol. Sur. Kentucky. Review. (American Geologist, Vol. v, pp. 107, 108. Minneapolis, 1890.) A short notice of the work.

Keyes, Charles R. Age of Certain Sandstones near Iowa City. (Proc. Iowa Acad. Sci., Vol. I, Pt. II, p. 25. Des Moines, 1892.) Owing to the recent discovery of fossils in the sandstones near Iowa City the suggestion is made that their age may be Kinderhook (Lower Carboniferous) instead of Upper Coal Measures, as has been heretofore regarded.

Keyes, Charles R. American Species of Polyphemopsis. (Proc. Acad. Nat. Sci., Phila., pp. 299-302. Philadelphia, 1889.) The American species referred to this genus are critically considered and their relations to other genera pointed out. The generic name is not regarded as applicable to any American gasteropods.

Keyes, Charles R. Annotated Catalogue of the Mollusca of Iowa. (Bulletin Essex Institute, Vol. xx. Salem, 1889.) Numerous references to, and notes on, Pleistocene species.

Keyes, Charles R. Attachment of Platyceras to Fossil Crinoidea. (American Naturalist, Vol. xxii, pp. 924, 925. Philadelphia, 1888.) A brief summary of observations.

Keyes, Charles R. Attachment of Platyceras to Palæocrinoidea; and its Effects in Modifying the Form of the Shell. (Proc. Am. Philosophical Soc., Vol. xxv, pp. 231-243, 1 plate. Philadelphia, 1888.) A historical summary of the occurrence of Platyceras on crinoids, with detailed descriptions of numerous examples. The following species are figured and described as new:

Platyceras capax.
Platyceras obliquum.
Platyceras latum.
Platyceras formosum.

Reviewed in Am Geologist, iii, 148-149, 1889; also in Neues Jahrbuch, 182, 1891.

Keyes, Charles R. Carboniferous Echinodermata of the Mississippi Basin. (Am. Jour. Sci., (3), Vol. xxxviii, pp. 186-193. New Haven, 1889.) A description of the structural features of the leading groups of crinoids, with an account of their evolution. A tabulated list showing the stratigraphical range of the leading genera is also given. Reviewed in Am. Naturalist, xxiv, 767, 1890; also in Neues Jahrbuch, 185, 186, 1892.

Keyes, Charles R. Certain Forms of Straparollus from Southeastern Iowa. (American Geologist, Vol. v, pp. 193-197, 1 plate. Minneapolis, 1890.) The various species considered and their relations described. The following forms are figured:

Straparollus obtusus.
Straparollus roberti.
Straparollus latus.
Straparollus macromphalus.
Straparollus barrisi.

K[eyes], C[harles] R. Classification of Crinoidea. Review. (American Naturalist, Vol. xxiii, p. 153. Philadelphia, 1889.) A review of the discovery of the ventral structure of Taxocrinus and Halpocrinus and Consequent Modifications in the classification of Crinoidea; by Charles Wachsmuth, and Frank Springer in the Proceedings of the Academy of Natural Science of Philadelphia, for November 27, 1888.

Keyes, Charles R. Classification of Lower Carboniferous Rocks of Mississippi Valley. (Pamphlet, Washington: Judd & Detweiller, printers, pp. 1-24, 1 plate. 1892.) Section and details of the Lower Carboniferous rocks along the Mississippi River described and list of fossils given.

Keyes, Charles R. Coal Measures of Central Iowa; and Particularly in the Vicinity of Des Moines. (American Geologist, Vol. ii, pp. 396-404. Minneapolis, 1888.) A sketch, accompanied by sections of the geological formations near Des Moines, with references to the fossils found in the middle Coal Measures. Incidental references to the eastern extension of the Cretaceous in central Iowa.

Keyes, Charles R. Contribution to the Fauna of the Lower Coal Measures of Central Iowa. (Proc. Iowa Acad. Sci., Vol. i, Pt. ii, pp. 22, 23. Des Moines, 1892.) A preliminary statement in regard to the fossils of central Iowa. The following three species described:

Pleurotomaria modesta.
Soleniscus humilis.
Chonetes lævis.

[Keyes, Charles R.] Crotalocrinus; Its Structure and Zoological Position; by Charles Wachsmuth and Frank Springer: Proc. Acad. Nat. Sci., Philadelphia, Nov. 27, 1888. Review. (American Geologist, Vol. III, p. 201. Minneapolis, 1889.)

Keyes, Charles R. Description of two New Fossils from the Iowa Devonian. (Proc. Acad. Nat. Sci., Phila., 1888, pp. 247-249, 1 plate. Philadelphia, 1888.) The following species described as new and figured:

Cyrtoceras opimus.
Conocardium altum.

K[eyes], C[harles] R. Die Stämme des Thierreichs, von M. Neumayr, Erster Band: Wirbellose Thiere, 1889. (American Geologist, Vol. IV, pp. 58, 59. Minneapolis, 1889.) A short notice of the work.

Keyes, Charles R. Discovery of Fossils in the Limestones of Frederick County, Maryland. (Johns Hopkins University Circulars, No. 84, p. 32. Baltimore, 1890.) Trenton species are noted for the first time in the Frederick limestone east of Catoctin Mountain.

[Keyes, Charles R.] Discovery of the Ventral Structure of Taxocrinus and Haplocrinus and Consequent Modifications in the Classification of the Crinoidea; by Charles Wachsmuth and Frank Springer: Proc. Acad. Nat. Sci., Phila., 1888 Review. (American Geologist, Vol. III, pp. 200, 201. Minneapolis, 1889.) A full synoptic abstract of the paper.

Keyes, Charles R. Distribution of Certain Loess Fossils. (American Geologist, Vol. IV, pp. 109-121. Minneapolis, 1889.) A brief account of the present known geographical range of certain living gasteropods which have been supposed to be extinct until quite recently.

Keyes, Charles R. Distribution of Helicina Occulta. (The Nautilus, Vol. III, pp. 18, 19. Philadelphia, 1889.) A description of the different forms of this species compared.

Keyes, Charles R. Eastern Extension of the Cretaceous in Iowa. (Proc. Iowa Acad. Sci., Vol. I, Pt. II, p. 21. Des Moines, 1892.) The finding of Cretaceous bowlders in the drift of central Iowa is noted and a number of fossils are identified.

K[eyes], C[harles] R. Elemente der Paleontologie, von Gustave Steinmann, unter Mitwirkung von Ludwig Doderlein, I, Hälfte, Protozoa-Gasteropoda. 1888. Review. (American Geologist, Vol. III, pp. 401, 402. Minneapolis, 1889.) A short notice of the work.

Keyes, Charles R. Evolution of Strophostylus. (Proc. Iowa Acad. Sci., Vol. I, Pt. II, p. 25. Des Moines, 1892.) The relation and limits of evolution described and the interrelations of the various species pointed out.

Keyes, Charles R. Fauna of the Lower Coal Measures of Central Iowa. (Proc. Acad. Nat. Sci, Phila., pp. 222-247, 1 plate. Philadelphia, 1888.) Descriptive notes on some 50 species found at Des Moines. The following species are described in full:

Chonetes levis sp. nov.
Bellerophon urii Fleming.
Pleurotomaria brazoensis Shumard.
Pleurotomaria modesta sp. nov.
Pleurotomaria grayvillensis Norwood and Pratten.
Macrochilus humilus sp. nov.

Reviewed in American Geologist, II, 432, 1888.

Keyes, Charles R. Fossil Faunas in Central Iowa. (Proc. Acad. Nat. Sci., Phila., pp. 242-265. Philadelphia, 1891.) The biological relations of the fossils summarized; a general section of the rocks of the region and a list of the fossils found in the middle Coal Measures, together with notes and bibliographic references to many of the forms found in the rocks near Des Moines. A synoptical table of the genera and the species thus far recognized is appended.

Keyes, Charles R. Fossils from the Lower Coal Measures at Des Moines, Iowa. (American Geologist, Vol. II, pp. 23–28. Minneapolis, 1888.) Summary of a more extensive paper and list of fossils given.

Keyes, Charles R. Genesis of American Actinocrinidæ. (American Naturalist, Vol. XXIV, pp. 243–254, 3 plates. Philadelphia, 1890.) The limits of the different genera are discussed and their characters pointed out. Diagrams of the arrangements of plates in the various groups and a chart showing the stratigraphical range expansion and evolution of the different groups are given.

Keyes, Charles R. Lower Carbonic Gasteropoda from Burlington, Iowa. (Proc. Acad. Nat. Sci., Phila., pp. 284–298. Philadelphia, 1889.) Annotated list of the species from the Kinderhook and Burlington limestones found in vicinity of Burlington, Iowa.

Keyes, Charles R. Naticoid Genus Strophostylus. (American Naturalist, Vol. XXIV, pp. 1111–1117, 1 plate. Philadelphia, 1890.) A description of the various groups is given and their development. The transitions are also noted and indicated by connecting lines.

Keyes, Charles R. New Conocardium from the Devonian. (Proc. Iowa Acad. Sci., Vol. I, Pt. II, pp. 23, 24. Des Moines, 1892.) *Conocardium altum* described. The description had, however, been previously published elsewhere, owing to the delay in printing of the present publication.

Keyes, Charles R. Paleozoic Fossils of Maryland. (Johns Hopkins University Circulars, Vol. XI, pp. 28, 29. Baltimore, 1891.) A complete list, with references, of the fossils now known to have been described from Maryland Paleozoic rocks.

Keyes, Charles R. Perisomic Plates of the Crinoids. (American Geologist, Vol. VII, pp. 255–258. Minneapolis, 1891.) This is partly a critical review of a recent paper of the same title by Wachsmuth and Springer.

Keyes, Charles R. Platyceras Group of Paleozoic Gasteropods (American Geologist, Vol. X, pp. 273, 277. Minneapolis, 1892.) The relations of the different species of the genus described in detail.

Keyes, Charles R. Preliminary Note on the Sedentary Habits of Platyceras. (Proc. Iowa Acad. Sci., Vol. I, Pt. II, p. 24. Des Moines, 1892.) A preliminary abstract of a more extensive paper published elsewhere.

Keyes, Charles R. Present Basal Line of Delimitation of the Carboniferous of Northeastern Missouri. (American Geologist, Vol. X, pp. 380–384. Minneapolis, 1892.) Faunal and stratigraphical features of the commonly recognized base of the Carboniferous in Missouri are described. References and lists of fossils are given.

Keyes, Charles R. Preservation of Color in Fossil Shells. (The Nautilus, Vol. IV, pp. 30–31. Philadelphia, 1890.) The preservation of coloring matter in certain gasteropod shells from the Coal Measures of Illinois is recorded.

Keyes, Charles R. Principal Mississippian Section. (Bul. Geol. Soc. America, Vol. III, pp. 289–300, 1 plate, 1892.) A historical consideration of the various terms applied to rocks and a detailed description of the different formations are given. A classification of the Mississippian series is proposed in accordance with the observations recently made.

Keyes, Charles R. Relation of Platyceras and Capulus. (American Geologist, Vol. III, pp. 6–9. Minneapolis, 1890.) The characters of both groups are compared, and the conclusions arrived at that they are to be regarded as coextensive.

Keyes, Charles R. Remarkable Fauna at the Base of the Burlington Limestone in Northeastern Missouri. (Am. Jour. Sci., (3), Vol. XLIV, pp. 447–452. New Haven, 1892.) A characteristic fauna is recorded as intercalated in the Burlington limestone at Louisiana, Missouri. Lists of species are also given.

Keyes, Charles R. Remarks on Perisomic Plates of the Crinoids. (Am. Jour. Sci., (3), Vol. XLI, pp. 247, 248. New Haven, 1891.) Some brief notes on the structure of species recently described.

Keyes, Charles R. Review of Progress of American Invertebrate Paleontology for the year 1890. (American Naturalist, Vol. XXV, pp. 327–333. Philadelphia, 1891.) A brief account of the American papers published during the year 1890.

Keyes, Charles R. Review of Progress of American Invertebrate Paleontology for 1889. (American Naturalist, Vol. XXIV, pp. 131–138. Philadelphia, 1890.) A list of the papers and their places of publication which appeared during the year 1889.

Keyes, Charles R. Soleniscus: Its Generic Characters and Relations. (American Naturalist, Vol. XXIII, pp. 420–424. Philadelphia, 1889.) The genus and its relations to allied groups fully described and the American forms to be referred to it listed.

Keyes, Charles R. Sphærodoma: A Genus of Fossil Gasteropoda. (Proc. Acad. Nat. Sci., Phila., pp. 303–309. Philadelphia, 1889.) The genus described as new and the American forms to be referred to it are tabulated and their full synonymy given.

Keyes, Charles R. Stratigraphy of Carboniferous in Central Iowa. (Bul. Geol. Soc. America, Vol. II, pp. 277–292, 2 plates. 1891.) There is given a full description of the various sections exposed along the Des Moines River in the central part of the State, special reference being made to the lithological characters of the strata, and the stratigraphical relations of the various beds. Several marked unconformities are described and illustrated, and the leading faunal aspects of the region tabulated.

Keyes, Charles R. Sedentary Habits of Platyceras. (Am. Jour. Sci., (3,) Vol. XXXVI, pp. 268–272. New Haven, 1888.) Notes on habits of various species, as deduced from observations made on fossils. The attachment of the gasteropods to crinoids described and its significance pointed out.

Keyes, Charles R. Subgeneric Groups of Naticopsis. (American Geologist, Vol. IV, pp. 193–196. Minneapolis, 1889.) The various genera and minor groups related to the genus described and their relations to one another contrasted.

Keyes, Charles R. Synopsis of American Carbonic Calyptræidæ. (Proc. Acad. Nat. Sci., Phila., pp. 160, 181, 1 plate. Philadelphia, 1890.) This is essentially a treatment of the forms referred to Capulus or Platyceras. The generic characters are described, together with the general structural features and the relations to other genera. The variation exhibited is discussed, and the habits of the organisms described, especially the relations to crinoids. Numerous examples are given, and a table of the various species of crinoids and Capuli found associated. The arrangement of the American species is given in a stratigraphical catalogue. The following species are described, most of them figured:

Capulus occidens (Walcott).
Capulus? piso (Walcott).
Capulus formosus (Keyes).
Capulus cornuformis (Winchell).
Capulus haliotoides (Meek & Worthen).
Capulus lodiensis (Meek).
Capulus paralius (White & Whitfield).
Capulus subplicatus (Meek & Worthen).
Capulus cyrtolites (McChesney).
Capulus biserialis (Hall).
Capulus latus (Keyes).
Capulus obliquus (Keyes).
Capulus tribulosus (White).
Capulus acutirostris Hall.
Capulus equilateralis (Hall).
Capulus fissurella (Hall).
Capulus infundibulum (Meek & Worthen).
Capulus sulcatinus sp. nov.
Capulus ovalis Stephens.
Capulus chesterensis (Meek & Worthen).
Capulus parvus Swallow.
Capulus spinigerus (Worthen).

Reviewed in Am. Geologist, VI, 248, 249, 1890; and Am. Naturalist, XXIV, 1185, 1890.

Keyes, Charles R. Variation Exhibited by a Carbonic Gasteropod. (American Geologist, Vol. III, pp. 330-334, 2 plates. Minneapolis, 1889.) Forms from a large series of *Platyceras equilateralis* compared.

Keyes, Charles R., and R. Ellsworth Call. Quaternary Section Eight Miles Southeast of Des Moines, Iowa. (Proc. Iowa Acad. Sci., Vol. I, Pt. II, p. 30. Des Moines, 1892.) Description of a section near the terminal moraine near Des Moines, with mention of fossils occurring in loess.

Kicking Horse Pass, Manitoba, Fossils. C. Lapworth. (Science, IX, 320. 1887.)

Kinderhook Fossils, Three. R. R. Rowley. (American Geologist, III, 275, 276. 1889.)

Kinderhook Group, Crinoids and Blastoids from Lower Carboniferous Rocks at Le Grand, Iowa. Charles Wachsmuth and Frank Springer. (Geol. Sur. Illinois, VIII, 155-205. 1890.) A number of species described and figured as new.

Kinderhook, Supposed, near Mouth of Pine Creek, Geological Problems in Muscatine County, Iowa, with Special Reference to Rectification. S. Calvin. (American Geologist, III, 25-36. 1889.) Mention made of different species.

Kirby, J. W., T. R. Jones and. Ostracoda from Mabou Coal Field of Nova Scotia. (Geological Magazine, Dec. iii, Vol. VI, pp. 269-271. London, 1889.)

Knochenfische aus der mittleren Kreide von Kansas, Ueber einige fossile. A. R. Crook. (Palæontographica, XXXIX, 107. 1892.)

Knowlton, F. H. Problematic Organisms from Devonian at the Falls of the Ohio. (Am. Jour. Sci., (3), Vol. XXXVII, pp. 202-209. New Haven, 1889.) *Calcisparra lemoni* described and figured.

Koenen, A. von. Contribution to Tertiary Fauna of Florida, with Special Reference to Miocene Shell Beds of Tampa and to Pleistocene beds of Caloosahatchie River, I; by W. H. Dall: Trans. Wagner Free Inst. Sci. Review. (Neues Jahrbuch, 179, 180. 1892.)

Koenen, A. von. Marine Eocene, Fresh-Water Miocene and other Fossil Mollusca of Western North America; by C. A. White: U. S. Geol Sur., Bul. No. 18. 1885. Review. (Neues Jahrbuch, 475. 1888.)

Koenen, A. von. Miocene Fossils from Southern New Jersey; by A. Heilprin: Proc. Acad. Nat. Sci., Phila., 1888. Review. (Neues Jahrbuch, 351. 1890.)

Koenen, A. von. Miocene Invertebrates from Virginia; by O. Meyer: Proc. Am. Phil. Soc., 1888. Review. (Neues Jahrbuch, 155. 1889.)

Koenen, A. von. Nature of Organic Species; by Joseph Leidy: Trans. Wagner Free Inst. Sci., Phila., 1889. Review. (Neues Jahrbuch, 331. 1891.)

Koenen, A. von. Relation of Laramie Molluscan Fauna to that of Succeeding Fresh-Water Eocene; by C. A. White: Bul. U. S. Geol. Sur., No. 34. Review. (Neues Jahrbuch, 347. 1888.)

Koenen, A. von. Upper Tertiary Invertebrates from West Side of Chesapeake Bay; by O. Meyer: Proc. Acad. Nat. Sci. Phila., 1890. Review. (Neues Jahrbuch, 135. 1889.)

Koken, E. Artiodactyle, Horned, (Protoceras Celer) from Miocene; by O. C. Marsh: Am. Jour. Sci., 1891. Review. (Neues Jahrbuch, 331. 1892.)

Koken, E. Corrections of Notes on Dinocerata; by E. D. Cope: Am. Nat., 1886. Review. (Neues Jahrbuch, 332, 333. 1888.)

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Castoroides ohioensis.
Platygonus vetus.

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Leidy, Joseph. Fossil Vertebrates from Florida. (Proc. Acad. Nat. Sci., Phila., Vol. XLII, pp. 64, 65. Philadelphia, 1890.) Brief notes on Pleistocene species.

Leidy. Joseph. Fossil Vertebrates from Florida. (Proc. Acad. Nat. Sci., Phila., Vol. XLI, pp. 96, 97. Philadelphia, 1889.) *Glyptodon septentrionalis* and *Emys euglypha* described from Florida Pleistocene.

Leidy, Joseph. Hippotherium and Rhinoceras from Florida. (Proc. Acad. Nat. Sci., Phila. Vol, XLII, pp. 182, 183. Philadelphia, 1890.) *Hippotherium princeps* and *Rhinoceras longipes* described.

Leidy, Joseph. Mammalian Remains from Rock Crevices in Florida. (Trans. Wagner Free Inst. Sci., Vol. II, pp. 13-17. Philadelphia, 1889.) Described mammals related to *Macheirodus neogens* and proposes the following new species:

Macheirodus floridana.
Elephas primigenius.
Equus fraterrus.
Elephas columbia.
Anchema.

Reviewed in Am. Jour. Sci., (3), XXXIX, 321, 322, 1890

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Leidy, Joseph. Mastodon and Capybara of South Carolina. (Proc. Acad. Nat. Sci., Phila., Vol. XLII, pp. 184, 185. Philadelphia, 1890.) *Mastodon rugosidens* and *Hydrochoreus robustus* (?) described without figures.

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Lesley, J. P. Dictionary of the Fossils of Pennsylvania. (Geol. Sur. Pennsylvania, P4, Vols. I, II, and III. Harrisburg, 1889.) A catalogue of the fossils found in the state, with notes and numerous illustrations. The following are described as new by George B. Simpson:

Syringothyris angulatus.
Syringothyris randalli.
Nucula simmosa.
Nucula subtringona.
Orthis pennsylvania.
Orthis subcircula.
Otozoum parvum.
Platyceras breve.
Platyceras dorsale.
Platyceras inæquale.
Platyceras mitelliforme.
Modiolopsis subrhomboidea.
Modiomorpha subalta, var. chemungensis, var. nov.
Modiomorpha rigidula.
Beyrichia ungula.
Chonetes punctatus.
Cladopora rectilineata.
Lyriopecten alternatus.
Sphenotus chemungensis.
Platyceras striatum.
Platyceras varians.
Ptychopteria obsoleta.
Rhynchonella lævis.
Rhynchonella striata.

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Mammals, Evolution of Pre-Molar Teeth. W. B. Scott. (Proc. Acad. Nat. Sci., Phila., XLIV, 405–444. 1892.)

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Mammals of Wahsatch and Wind River Beds, Collection of 1891. H. F. Osborn and J. L. Wortman. (Bul. Am. Mus. Nat. Hist., IV, 81-147. 1892.)

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Mammals, Remarks upon Extinct. R. W. Shufeldt. (American Field, XXXII, Nos. 17-22. 1892.)

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Foraminifera and Radiolaria from Cretaceous of Manitoba. J. B. Tyrrell. (Trans. Roy. Soc. Canada, XIII, Sec. IV, 111-115. 1890.)

Fossils from Kicking Horse Pass, Manitoba. C. Lapworth. (Science, IX, 320. 1887.)

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Micro-Paleontology of Cambro-Silurian Rocks of Canada. E. O. Ulrich. (Geol. and Nat. Hist. Sur. Canada, Micro-Paleontology, Part II, 27-57. 1889.)

Orthoceratidæ of Trenton Limestone of Winnepeg Basin. J. F. Whiteaves. (Trans. Roy. Soc. Canada, IX, Sec. IV, 77–80. 1891.)

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Marcellus Epoch in State of New York, List of Species Constituting Known Fauna and Flora. J. M. Clarke. (State Cab. Nat. Hist., New York, 42d Ann. Rep., 406–407 1889.)

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Marcou, Jules. American Necomian and the Gryphæa Pitcheri. (American Geologist, Vol. V, pp. 315-317. Minneapolis, 1890.) A brief note of correction.

Marcou, Jules. Classification of the Dyas, Trias and Jura in Northwest Texas. (American Geologist, Vol. X, pp. 369–377. Minneapolis, 1892.) Numerous references to fossils.

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Marcou, Jules. Lower and Middle Taconic of Europe and North America. (American Geologist, Vol. V, pp. 78–102, 221-233, and 357–375. Minneapolis, 1890.) Numerous references to fossils.

Marcou, Jules. Mesozoic Series of New Mexico. (American Geologist, Vol. IV, pp. 155–165, 216–229. Minneapolis, 1889.) References to Cretaceous fossils.

Marcou, Jules. Original Locality of the Gryphæa Pitcheri, Morton. (American Geologist, Vol. III, pp. 188–193. Minneapolis, 1889.) A discussion of the early discovery of Jurassic fossils in the Southwest.

Marcou, Jules. Paleontologic and Stratigraphic "Principles" of the Adversaries of the Taconic. (American Geologist, Vol II, pp. 10–23, 67–88. Minneapolis, 1888.) A review of the Taconic question with references to fossils found.

Marcou, Jules. Remarks on Professor Henry S. Williams, Address On the Scope of Paleontology and its Value to Geologists before Section E, A. A. A. S., Aug., 1892. (American Geologist, Vol. X, pp. 257–260. Minneapolis, 1892.) A critical review of the address.

Marcou, Jules. Taconic in the Salt Range of Puniab (India). (American Geologist, Vol. IV, pp. 60–62. Minneapolis, 1889.) Numerous references to fossils.

Marcou, J. B. Review of Progress of North American Paleontology for the year 1887. (American Naturalist, Vol. XXII, pp. 679–891. Philadelphia, 1888.) List of papers appearing on the subject during the year.

Marine Shells and Fragments of Shells in the Till near Boston. W. Upham. (Am. Jour. Sci., (3), XXXVII, 359-372. 1889.)

Marsh, O. C. Additional Characters of the Ceratopsidæ, with Notice of new Cretaceous Dinosaurs. (Am. Jour. Sci., (3), Vol. XXXIX, pp. 418–426, 3 plates. New Haven, 1890.) Recent notes on the group with descriptions and figures of the following new species:

Triceratops sulcatus.
Trachodon longiceps.
Hadrosaurus breviceps.
Claosaurus Marsh.

Reviewed in Neues Jahrbuch, 451, 452, 1891.

Marsh, O. C. Ceratopsidæ (or Horned Dinosaurs) of North America. (Brit. As. Ad. Sci., pp. 793-795. London, 1890.)

Marsh, O. C. Cretaceous Mammals of North America. (Brit. As. Ad. Sci., pp. 853, 854. London, 1890.)

Marsh, O. C. Comparisons of the Principal Forms of the Dinosauria of Europe and America. (Am. Jour. Sci., (3), Vol. XXXVII, pp. 323–331. New Haven, 1889.) Abstract of a paper read before Section C, Brit. As. Adv. Sci., Bath, 1888. Extended comparisons of different forms.

Marsh, O. C. Comparisons of the Principal Forms of Dinosauria of Europe and America. (Rep. British As. Adv. Sci., 1888, p. 660. London, 1889.) A paper read at the Bath meeting. Reviewed in Neues Jahrbuch, 424–433, 1890.

Marsh, O. C. Description of New Dinosaurian Reptiles. (Am. Jour. Sci., (3), Vol. xxxix, pp. 81-86, 1 plate. New Haven, 1890.) The following described as new:

Triceratops serratus.
Triceratops prosus.
Ceratops paucidens (Hadrosaurus paucidens Marsh).
Ormithominus.
Ormithominus velox.
Barosaurus.
Barosaurus lentus.

Reviewed in Neues Jahrbuch, 149, 150, 1891.

Marsh, O. C. Discovery of Cretaceous Mammalia. (Am. Jour. Sci., (3), Vol. xxxviii, pp. 81-90, 4 plates. New Haven, 1889.) An account of the discovery of mammalian remains in the Laramie of Dakota and Wyoming with descriptions of the following:

Cimolomys gracilis gen. et sp. nov.
Cimolomys bellus sp. nov.
Cimolodon mitidus gen. et sp. nov.
Nanomys minutus gen. et sp. nov.
Dipriodon robustus gen. et sp. nov.
Tripriodon cœlatus gen. et sp. nov.
Tripriodon cæperatus sp. nov.
Selenacodon fragilis gen. et sp. nov.
Camptomus amplus gen. et sp. nov.
Dryolestes tenax sp. nov.
Halodon sulptus gen. et sp. nov.
Dipelphodon vorax gen. et sp. nov
Dipelphodon ferox sp. nov.
Dipelphodon comptus sp. nov.
Cimolestes incisus gen. et sp. nov.
Cimolestes curtus sp. nov.
Pidiomys elegans gen. et sp. nov.

Reviewed in Neues Jahrbuch, 141-143, 1890; also Am. Geologist, iv, 108-109, 1889.

Marsh, O. C. Discovery of Cretaceous Mammalia, Part ii. (Am. Jour. Sci., (3), Vol. xxviii, pp. 177-180, 2 plates. New Haven, 1888.) Figures and describes the following:

Cimolomys digona sp. nov.
Selenacodon brevis sp. nov.
Stagodon nitor gen. et sp. nov.
Platacodon nanus gen. et sp. nov.
Oracodon anceps gen. et sp. nov.
Allacodon lentus gen. et sp. nov.
Halodon formosus sp. nov.

Marsh, O. C. Discovery of Cretaceous Mammalia. (Am. Jour. Sci., (3), Vol. xliii, pp. 247-262, 7 plates. New Haven, 1892.) A number of forms are discussed and the following new species described from the Laramie of Wyoming:

Cimolodon parvus.
Cimolodon agilis.
Allacodon fortis.
Allacodon rarus.
Oracodon conulus.
Stagodon validus.
Telacodon lævis gen. et sp. nov.
Batodon tenuis gen. et sp. nov.

Marsh, O. C. Distinctive Characters of the order Hallopoda. (Am. Jour. Sci., (3), Vol. xxxix, pp. 415-417. New Haven, 1890.) A study of the characteristics of the order. Reviewed in Neues Jahrbuch, 155, 156, 1891.

Marsh, O. C. Extinct Eocene Mammals (Mesodactyla). (Am. Jour. Sci., (3), Vol. xliii, pp. 445-449. New Haven, 1893.) The order of Mesodactyla defined from the Eocene of New Mexico and Meniscotherium and Hyracops referred to it. Reviewed in Natural Science, i, 247, 1892.

Marsh, O. C. Geological Horizons as determined by Vertebrate Fossils. (Am. Jour. Sci., (3), Vol. xlii, pp. 336-338. New Haven, 1891.) Abstract of a communication made to the International Geological Congress, Washington, 1891. A study of the stratigraphic sequence of vertebrate forms.

Marsh, O. C. Gigantic Ceratopsidæ, or Horned Dinosaurs, of North America. (Am. Jour. Sci., (3), Vol. xli, pp. 167-178. New Haven, 1891.) A paper read before the British Association for the Advancement of Science, Leeds, 1890. Containing a general résumé of the anatomical characters of the group. Reviewed in Neues Jahrbuch, 329, 1892; also Geological Magazine, iii, viii, 193-198 and 241-247, 1891.

Marsh, O. C. Horned Artiodactyle from the Miocene. (Am. Jour. Sci., (3), Vol. XLII, pp. 81, 82. New Haven, 1891) Description of *Protoceras celer* of the family Protoceratidæ (fam., gen. et sp. nov.) from the Miocene of South Dakota.

Marsh, O. C. Mesozoic Mammalia. (American Naturalist, Vol. XXV, pp. 611-616. Philadelphia, 1889.) An answer to an article by Osborn in American Naturalist, Vol. XXV, 595-611, 1891.

Marsh, O. C. Mesozoic Mammalia. (Proc. Acad. Nat. Sci., Phila., Vol. LIII, pp. 237-241. Philadelphia, 1891.) A reply to the criticism by Osborn in same serial, XLIII, 124-135. 1891.

Marsh, O. C. New American Dinosauria. (Am. Jour. Sci., (3), Vol. XXXVII, pp. 331-336. New Haven, 1889.) The following new species described:

Anchisaurus major.
Morosaurus lentus.
Morosaurus agilis.
Ceratops horridus.
Hadrosaurus breviceps.
Hadrosaurus paucideres.

Reviewed in Neues Jahrbuch, 434, 1890.

Marsh, O. C. New Family of Horned Dinosauria from the Cretaceous. (Am. Jour. Sci., (3), Vol. XXXVI, pp. 477, 478, 1 plate. New Haven, 1888.) *Ceratops mountanus* is described as a new genus and species.

Marsh, O. C. New Fossil Sirenian from California. (Am. Jour. Sci., (3), Vol. XXXV, pp. 94-96, 1 plate. New Haven, 1888.) The following genus and species described as new: *Desmostylus hesperus*. Reviewed in Neues Jahrbuch, 341, 1891.

Marsh, O. C. New Genus of Sauropoda and Other New Dinosaurs from the Potomac Formation. (Am. Jour. Sci., (3), Vol. XXXV, pp. 89-94, 1 plate. New Haven, 1888.) The following described as new:

Pleurocœlus nanus (gen. et sp. nov.)
Pleurocœlus altus sp. nov.
Priconodon crassus gen. et sp. nov.
Allosandrus medius sp. nov.
Cœlurus gracilis sp. nov.

Reviewed in Neues Jahrbuch, 155, 1891.

Marsh, O. C. New Tertiary Mammals. (Am. Jour. Sci., (3), Vol. XXXIX, pp. 523-525. New Haven, 1890.) The following described as new.

Diploclonus.
Diploclonus samplus.
Teleodus.
Teleodus avus.
Colodon.
Colodon luxatus.
Hyopotanus deflectus.
Limnolyops.

Marsh, O. C. New Vertebrate Fossils. (Am. Jour. Sci., (3), Vol. XLII, pp. 265-269: New Haven, 1891.) The following species are described without figures as new.

Trisceratops elatus.
Torosaurus latus.
Torosaurus gladius.
Ammosaurus.
Ammosaurus major.
Anchisaurus colorus.
Allops crassicornis.
Brontops validus.
Titanops medius.

Marsh, O. C. Notes on Mesozoic Vertebrate Fossils. (Am. Jour. Sci., (3), Vol. XLIV, pp. 171-176, 4 plates. New Haven, 1892.) Includes observations on the following:

Claosaurus Marsh.
Palæoscincus Leidy.
Ambylosodon Leidy.
Cimolopteryx Marsh.

Marsh, O. C. Notice of Gigantic Horned Dinosauria from the Cretaceous. (Am. Jour. Sci., (3), Vol. XXXVIII, pp. 173-176. New Haven, 1889.) Contains descriptions of the following forms:

Triceratops horridus gen. nov.
Triceratops flabellatus sp. nov.
Triceratops galeus sp. nov.
Nodosaurus textilis gen. et sp. nov.

Marsh, O. C. Recent Polydactyle Horses. (Am. Jour. Sci., (3), Vol. XLIII, pp. 339-354, 1 plate. New Haven, 1892.) The subject of horses possessing extra digits is taken up, figured, descriptions of specimens given and the general relationship and ancestry of the horse discussed.

Marsh, O. C. Reptiles from Laramie Formation. (Am. Jour. Sci., (3), Vol. XLIII, pp. 449-453. New Haven, 1892.) The following described:

Conioplus precedens gen. et sp. nov.
Chamops signis gen. et sp. nov.
Iguanavus teres sp. nov.
Ormithomimus sedens sp. nov.
Claosaurus annectens sp. nov.

Marsh, O. C. Restoration of Brontops Robustus, from the Miocene of America. (Am. Jour. Sci., (3), Vol. XXXVII, pp. 163-165. New Haven, 1889.) Abstract of a paper read before Section D, of the British Association for the Advancement of Science, at the Bath meeting, Sept. 7th, 1888. Reviewed in Neues Jahrbuch, 140, 1890.

Marsh, O. C. Restorations of Claosaurus and Ceratosaurus. (Am. Jour. Sci., (3), Vol. XLIV, pp. 343-349, 2 plates. New Haven, 1892.) Descriptive notes with restorations and plates of those genera from the Jurassic of Colorado and from the Laramie of Wyoming.

Marsh, O. C. Restoration of Mastodon Americanus Cuvier. (Am. Jour. Sci., (3), Vol. XLIV, p. 350, 1 plate. New Haven, 1892.) A full page plate with descriptive notes of a specimen in the Yale Museum.

Marsh, O. C. Restoration of Stegosaurus. (Am. Jour. Sci., (3), Vol. XLII, pp. 179-181, 1 plate. New Haven, 1891.) A restoration of *Stegosaurus ungulatus* from the Jurassic of Wyoming. Reviewed in Geol. Mag., iii, VIII, 358-387, 1891.

Marsh, O. C. Restoration of Triceratops. (Am. Jour. Sci., (3), Vol. XLI, pp. 339-342, 2 plates. New Haven, 1891.) Restorations of *Triceratops prorsus* Marsh and *Brontosaurus excelsus* Marsh. Reviewed in Geol. Mag., iii, VIII, 248, 249, 1891.

Marsh, O. C. Skull of Torosaurus. (Am. Jour. Sci., (3), Vol. XLIII, pp. 81-84, 2 plates. New Haven, 1892.) The skull described and figured as exhibited in specimens from Colorado, Wyoming, and Montana.

Marsh, O. C. Triassic Dinosauria. (Am. Jour. Sci., (3), Vol. XLIII, pp. 543-546, 3 plates. New Haven, 1892.) *Anchisaurus colurus* and *A. solus* sp. nov., described from Connecticut Triassic and their relations to certain European forms considered.

Marsh on Extinct Horses and Other Mammals. E. D. Cope. (American Naturalist, XXVI. 410-412. 1892.)

Marsh on Hallopus and Other Dinosauria. G. Baur. (American Naturalist, XXIV, 569-571. 1890.)

Marsh's "Note on Mesozoic Mammalia," Reply. H. F. Osborn. (Proc. Am. As. Adv. Sci., XL, 290. 1892.) Abstract.

Marthas Vineyard, Erratic Cambrian Fossils in Neocene Gravels. J. B. Woodworth. (American Geologist, IX, 243-247. 1892.)

Marthas Vineyard, Occurrence of Fossils of Cretaceous Age on the Island. N. S. Shaler. (Bul. Mus. Comp. Zool. Harvard College, XVI, 89-97. 1889.)

Marthas Vineyard, Study of Gay Head. P. R. Uhler. (Trans. Maryland Acad. Sci., I, 204-212. 1888.)

Maryland.

Additions to Observations on Cretaceous and Eocene Formations of Maryland. P. R. Uhler. (Trans. Maryland Acad. Sci., I, 45-72. 1888.)

Albirupean Studies. P. R. Uhler. (Trans. Maryland Acad. Sci., I, 185-202. 1888.)

Cambrian Rocks of Pennsylvania and Maryland, from the Susquehanna to the Potomac. C. D. Walcott. (Am. Jour. Sci., (3), XLIV, 469-482. 1892.) Various fossils considered.

Maryland—Continued.

Catalogue of Shell-Bearing Marine Mollusks and Brachiopods of Southeastern Coast of the United States. W. H. Dall. (Bul. U. S. Nat. Mus., No. 37, 221 pp. 1889.)

Eocene Tertiary and its Cretaceous Associates in the State of Maryland. P. R. Uhler. (Trans. Maryland Acad. Sci., I, 11–32. 1888.)

Expedition, Third Annual Geological, into Southern Maryland and Virginia. W. B. Clark. (Johns Hopkins Univ. Circulars, No. 81, 69–71. 1890.) Various species enumerated.

Fossils in the Limestones of Frederick County, Maryland. C. R. Keyes. (Johns Hopkins Univ. Circulars, No. 84, 32. 1890.)

Oriskany Sandstone of Maryland, New York and Ontario, List of Fossils. C. Schuchert. (Eighth Ann. Rep. State Geologist, New York, for 1889, 50–56. 1889.)

Paleontology of New York. J. Hall. (Nat. Hist. New York, Pal., v, Pt. II, 278 pp. 1888.)

Paleozoic Fossils of Maryland. C. R. Keyes. (Johns Hopkins University Circulars, XI, 28–29. 1891.)

Sauropoda and Other New Dinosaurs from Potomac Formation. O. C. Marsh. (Am. Jour. Sci., (3), XXXV, 89–94. 1888.) Several forms described as new.

Tertiary Fauna of Florida. W. H. Dall. (Trans. Wagner Free Inst. Sci., Philadelphia, III, 1–178. 1890.)

Tertiary Invertebrates from West Side of Chesapeake Bay. O. Meyer. (Proc. Acad. Nat. Sci., Phila., XL, 170, 171. 1888.)

Marsupialia from the Laramie Formation. E. D. Cope. (Proc. Am. As. Adv. Sci., XLI, 177. 1893.) Abstract.

Mastodon Americanus, Cuvier, Restoration. O. C. Marsh. (Am. Jour. Sci., (3), XLIV, 350. 1892.)

Mastodon and Mammoth in Ontario, Canada. J. H. Panton. (Brit. As. Ad. Sci., 654, 655. 1891.)

Mastodon and Mammoth in Ontario, Canada. J. H. Panton. (Geol. Mag., Dec., iii, VIII, 504. 1891.) Abstract.

Mastodon Recently found in Tennessee. S. W. McCallie. (Science, XX, 333. 1892.)

Mastodon Remains in the Shenandoah Valley, Virginia. (American Geologist, VII, 335. 1891.)

Mastodon Remains on New York Island. R. W. Whitfield. (Science, XVIII, 342. 1891.)

Massachusetts.

Cambrian Fossils from Cohassett, Mass. C. D. Walcott. (Proc. Biol. Soc. Washington, VII, 155. 1892.)

Cambrian Fossils from Limestone of Nahant, Mass. A. F. Foerste. (Proc. Boston Soc. Nat. Hist., XXIII, 291. 1890.)

Cambrian Fossils in Neocene Gravels of Islands of Marthas Vineyard. J. B. Woodworth. (American Geologist, IX, 243–247. 1892.)

Cambrian Fossils of Bristol County, in Eastern Massachusetts. N. S. Shaler. (Bul. Mus. Comp. Zool., XVI, No. 2. 1888.)

Fauna of Lower Cambrian or Olenellus Zone. C. D. Walcott. (U. S. Geol. Sur., Tenth Ann. Rep., 511–688. 1890.)

Footprints from Connecticut Valley. M. M. Mittiver. (Proc. Am. As. Adv. Sci., XL, 286. 1892.) Abstract.

Fossils in Lower Taconic of Emmons. C. D. Walcott. (Proc. Am. As. Adv. Sci., XXXVI, 212, 213. 1888.) Abstract.

Gay Head, Marthas Vineyard. P. R. Uhler. (Trans. Maryland Acad. Sci., I, 204–212. 1888.)

Massachusetts—Continued.

Localities of Post-Tertiary and Tertiary Fossils in Massachusetts. W. W. Dodge. (Am. Jour. Sci., (3), xxxvi, 56, 57. 1888.)

Nantucket, Geology. N. S. Shaler. (Bul. U. S. Geol. Sur. No. 53. 1889.) Incidental references to fossils.

Occurrence of Fossils of Cretaceous Age on the Island of Marthas Vineyard. N. S. Shaler. (Bul. Mus. Comp. Zool. Harvard Coll., xvi, 89–97. 1889.)

Paleontological Horizons of the Limestone at Nahant, Mass. A. F. Foerste. (Boston. Soc. Nat. Hist., xxiv, 26–263. 1889.)

Preliminary Decription of North Attleborough Fossils. N. S. Shaler and A. F. Foerste. (Bul. Mus. Comp. Zool., xvi, No. 2, Geol. Ser., ii, 27–41. 1888.)

Recent Fossils near Boston. W. Upham. (Am. Jour. Sci., (3), xliii, 201–209. 1892.)

Shells, Marine, and Fragments of Shells in Till near Boston. W. Upham. (Am. Jour. Sci., (3), xxxvii, 359–372. 1889.)

Taconic System of Emmons and Use of Name Taconic in Geologic Nomenclature. C. D. Walcott. (Am. Jour. Sci., (3), xxxv, 229–242. 1888.) Incidental references to fossils.

Matthew, G. F. Basal Series of Cambrian Rocks in Acadia. (Can. Rec. Sci., Vol. iii, No. 1, pp. 21–29. Montreal, 1888.) Incidental references to fossils.

Matthew, G. F. Cambrian Organisms in Acadia. (Can. Rec. Sci., Vol. iii, pp. 383–387. Ottawa, 1889.) Reviewed in Ottawa Naturalist, iii, No. 3, 1889.

Matthew, G. F. Cambrian Organisms in Acadia. (Trans. Roy. Soc. Canada, Vol. vii, Sec. iv, pp. 135–162, 4 plates. Montreal, 1889.) The following species described and figured:

Buthotrephis antiqua Brongn.
Phycoidella stichidifera sp. nov.
Palæochorda setacea sp. nov.
Hydrocytinum silicula sp. nov.
Microphycus catenatus sp. nov.
Monadites globolosus sp. nov.
Monadites pyriformis sp. nov.
Monadites urceiformis sp. nov.
Radiolarites ovalis sp. nov.
Plocoscyphia (?) perantiqua sp. nov.
Astrocladia (?) elongata sp. nov.
Astrocladia (?) elegans sp. nov.
Astrocladia (?) virguloides sp. nov.
Dichoplectella irregularis sp. nov.
Hyalostelia minima sp. nov.
Platysolenites antiquissimus Eichw.
Obolus pulcher Matt.
Obolus (?) major sp. nov.
Linguella martinensis sp. nov.
Voborthella tenuis Schmidt.
Psammichnites gigas Torrell.
Arenicolites lyelli, var. minor Torrell.
Leperdita ventricosa sp. nov.
Leperditia steadia sp. nov.

Reviewed by Neues Jahrbuch, 315, 316, 1888.

Matthew, G. F. How is the Cambrian Divided? A plea for the Classification of Salter and Hicks. (American Geologist, Vol. vi, pp. 139, 140. Minneapolis, 1889.) References to Cambrian forms.

Matthew, G. F. Classification of Cambrian Rocks in Acadia. (Can. Rec. Sci., Vol. iii, No. 2, pp. 71–81. Montreal, 1888.) Incidental references to fossils.

Matthew, G. F. Eozoon and Other Low Organisms in Laurentian Rocks at St. John, N. B. (Bul. Nat. Hist. Soc. New Brunswick, No. 9, pp. 36–41. 1890.)

Matthew, G. F. Fish Remains in Lower Helderberg of New Brunswick. (American Geologist, Vol. viii, pp. 61–62. Minneapolis, 1891.) A note of correction.

Matthew, G. F. Illustrations of the Fauna of the St. Johns Group, No. v. (Trans. Roy. Soc. Canada, Vol. viii, Sec. iv, pp. 123–166, 6 plates. Montreal, 1890.) A general view of the succession of the faunas in the St. John group and descriptions, with figures, of the following:

Eocoine geminum sp. nov.
Lepidilla anomala Matt.
Platyceras aperta sp. nov.
Stenotheca concentrica Matt.

Matthew, G. F.—Continued.

Stenotheca concentrica, var. radiata Matt.
Stenotheca triangularis Matt.
Conocoryphe walcotti Matt.
Conocoryphe baileyi Hartt.
Paradoxides lamellatus Hartt.
Paradoxides mic-mac, var. pontificalis Matt.
Agraulos socalis Bill.
Agraulos (?) holocephalus sp. nov.
Medusites princeps Torrell.
Medusites radiata Mathorst.
Medusites costata Torrell.
Meducichnites gen. nov.
Linguella starri sp. nov.
Linguella radula sp. nov.
Eoichnites linæanus Torrell.
Ctinichnites ingenius sp. nov.
Psammichnites Torrell.
Fræna ramosa sp. nov.
Arenicolites brevis sp. nov.
Goniadichnites trichiformis sp. nov.
Moncraterion magnificum sp. nov.

Reviewed in Am. Jour. Sci., (3), XLII, 73–75, 1891.

Matthew, G. F. Illustrations of the St. John Group, No. VI. (Trans. Roy. Soc. Canada, Vol. IX, Sec. iv, pp. 33–65, 2 plates. Montreal, 1891.) Descriptions with figures of the following forms:

Dictyonema fabelliforme Eichwald.
Dictyonema fabelliforme, var. confertum.
Dictyonema fabelliforme, var. acadicum var. nov.
Dictyonema fabelliforme, var. norwegicum Kjerulf.
Bryograptus kjerulfi? Lap.?
Linguella lævis sp. nov.
Obolella? gemmula sp. nov.
Linnarissonia belti? Dav.
Acrocreta bailey? Matt.
Obolus refulgens sp. nov.
Orthis lenticularis Wahl.
Orthis lenticularis, var. atrypoides var. nov.
Orthis lenticularis, var. lyncioides var. nov.
Orthis lenticularis, var. strophomenoides var. nov.
Orthisina (?) johannensis sp. nov.?
Agnostus bisectus sp. nov.
Parabolina spinulosa Wahl.
Parabolina heres, var. lata var. nov.
Parabolina heres, var. grandis var. nov.
Protopeltura acanthura.
Peltura acarbeoides Wahl.
Leptoplastus lastus Matt.
Centopyge flagillifer Ang.
Centopyge spectabilis Brog.
Conocephalites? contiguus sp. nov.
Linguella starri, var. minor.
Agnostus pisiformus.
Anomocare stenotoides Matt.
Anomocare springeri Matt.
Obolus pulcher Matt.

Matthew, G. F. Cambrian Fossils. (American Geologist, Vol. VIII, pp. 287–291. Minneapolis, 1891.) Careful comparisons of the Taconic fauna of Emmons with that of the St. John group.

Matthew, G. F. Occurrence of Leptoplostus in Acadian Cambrian Rocks. (Canadian Record of Science, Vol. III, p. 485. Montreal, 1889.) Note the discovery of Leptoplastus in America.

Leptoplastus stenoides sp. nov.
Leptoplastus spiniger sp. nov.

Reviewed in Neues Jahrbuch, 459, 1891.

Matthew, G. F. Occurrence of Sponges in Laurentian Rocks at St. John. (Bul. Nat. Hist. Soc. New Brunswick, No. 9, pp. 42–45. 1890.) *Cyathospongia* (?) *eozoica* sp. nov., *Halichondrites graphitiferus* sp. nov. described.

Matthew, G. F. Protolenus, Genus of Cambrian Trilobites. (Bul. Nat. Hist. Soc. New Brunswick, No. 10, pp. 34–37. 1892.) *Protolenus elegans* described as new genus and species.

Matthew, G. F. Psammichnites and Early Trilobites of the Cambrian Rocks in Eastern Canada. (American Geologist, Vol. II, pp. 1–9. Minneapolis, 1888.) A detailed account of the zoological relations of the different groups of earlier trilobites, with tables.

itthew, G. F. Remarkable Organisms of the Silurian and Devonian Rocks in Southern New Brunswick. (Trans. Roy. Soc. Canada, Vol. VII, Sec. IV, pp. 49–62, 1 plate. Montreal, 1888.) The following species described and figured:

Diplaspis acadica Matthew.
Ceratiocaris pusillus sp. nov.
Bunodella horrida sp. nov.
Geroneura wilsoni gen. et sp nov.
Archæoscolex corneus gen. et sp. nov.
Eurypterella ornata gen. et sp. nov.

Reviewed in Ottawa Naturalist, III, No. 2, 1884; and Neues Jahrbuch, 329, 1891.

itthew, G. F. Second Note of Stenotheca. (Geological Magazine, Dec. iii, Vol. VI, pp. 210, 211. London, 1889.) *Stenotheca concentrica* described.

Callie, S. W. Mastodon Recently found in Tennessee. (Science, Vol. XX, p. 333. New York, 1892.) Announcement of discovery of remains.

Creary, J. M. Causes of Extinction of Species. (American Geologist, Vol. V, pp. 100–104. Minneapolis, 1890.) Illustrations of minor factors in the extinction of species.

Connell, R. G. Geology of Mt. Stephens, British Columbia. (American Geologist, Vol. III, pp. 22–25. Minneapolis, 1889.) References to the stratigraphical position of certain forms.

Connell, R. G. Exploration in the Yukon and Mackenzie Basins, N. W. T. (Geol. and Nat. Hist. Sur. Canada, Vol. IV, Ann. Rep. 1888–1889, Part D, 163 pp. Montreal, 1891.) Lists of fossils collected from the various formations given.

Gee, W. J. Geological Antecedents of Man in the Potomac Valley. (Am. Anthropologist, Vol. II, pp. 227–234, 1889.)

Gee, W. J. Paleolithic Man in America. (Pop. Sci. Monthly, Vol. XXXIV, pp. 20–36. New York, 1889.) Reviewed in Neues Jahrbuch, 479, 1889.

Innes, Wm., L. W. Bailey and. Explorations and Surveys in Portions of Northern New Brunswick and Adjacent Areas in Quebec and Maine. (Geol. and Nat. Hist. Sur. Canada, Ann. Rep. 1887, III, Part M, 527 pp. 1889.

chanical Causes of Origin of Dentition of Rodentia. E. D. Cope. (American Naturalist, XXII, 3–13. 1889.)

galonyx Beds in Kansas. J. A. Udden. (American Geologist, VII, 340–345. 1891.)

galonyx Bones not Before Known. J. M. Safford. (Proc. Am. As. Adv. Sci., XL, 289. 1892.) Abstract.

galonyx in Holmes county, Ohio. E. W. Claypole. (American Geologist, III, 122–132, 149–153. 1891.)

galonyx Leidyi, sp. nov., Description of a Skull. J. Lindahl. (Trans. Am. Phil. Soc., XVII, 1–12. 1892.)

galonyx, Pelvis, and Other Bones from the Big Bone Cave, Tennessee. J. M. Safford. (Bul. Geol. Soc. America, III, 121–123. 1892.)

niscotheriidæ and Chalicotherioidea. H. F. Osborn. (American Naturalist, XXV, 911, 912. 1891.)

niscotherium, a member of Chalicotherioidea? H. F. Osborn. (American Naturalist, XXVI, 306–309. 1892.)

rrill, George P. Ophiolite of Thurman, Warren County, N. Y., with Remarks on the Eozoon Canadense. (Am. Jour. Sci., (3), Vol. XXXVII, pp. 189–191. New Haven, 1889.) Occurrence of Eozoon in the Warren county serpentine discussed. Reviewed in Am. Geologist, III, 268, 269, 1889.

sodactyla, Extinct Eocene Mammal. O. C. Marsh. (Am. Jour. Sci., (3), XLIII, 445–449. 1892.)

sohippus and Leptomerys, Osteology, with Observations on the Modes and Factors of Evolution in Mammalia. W. B. Scott. (Jour. Morph., v, 301–406. 1891.)

sozoic Mammalia. O. C. Marsh. (American Naturalist, XXV, 611–616. 1889.)

lesozoic Mammalia," Reply to Prof. Marsh's Note. H. F. Osborn. (Proc. Am. As. Adv. Sci., XL, 290. 1892.) Abstract.

Mesozoic, North American. C. A. White. (Proc. Am. As. Adv. Sci., xxxviii, 205–226. 1890.)

Mesozoic, North American. C. A. White. (Science, xiv, 160–166. 1889.)

Mesozoic Series of New Mexico. J. Marcou. (American Geologist, iv, 155–165 and 216–229. 1889.) Various species of fossils referred to.

Mesozoic Types of Fossils, Texas Permian. C. A. White. (Bul. U. S. Geol. Sur., No. 77, 51 pp. 1891.)

Mesozoic Vertebrate Fossils, Notes on. O. C. Marsh. (Am. Jour. Sci., (3), xliv, 171–176. 1892.)

Method of Grouping Formations of Middle Cretaceous and the Employment of an Additional Term in the Nomenclature. G. H. Eldridge. (Am. Jour. Sci., (3), xxxviii, 313–321. 1889.) References made to various species.

Methods of Correlation; Cuboides Zone and its Fauna, A discussion. H. S. Williams. (Bul. Geol. Soc. America, i, 481–500. 1890.)

Metis, Little, Province of Quebec, Canada, Species of Fossil Sponges. J. W. Dawson and G. J. Hinde. (Proc. Peter Redpath Mus., McGill Univ., 49–68. 1888.)

Metis, Province of Quebec, Canada, Sponges. J. W. Dawson and G. J. Hinde. (Can. Rec. Sci., iii, 49–68. 1888.)

Metis, Sponges from Beds of Quebec Group of Sir William Logan. J. W. Dawson. (Can. Rec. Sci., iii, 429–430. 1889.)

Mexico.

Cretaceous Deposits, Geology and Paleontology. A. Heilprin. (Proc. Acad. Nat. Sci., Phila., xlii, 445–469. 1890.)

Cretaceous Fishes from Mexico. J. Felix. (Palæontographica, xxxvii, 189–194. 1891.)

Ueber die tektonischen Verhältnisse der Republik Mexiko. J. Felix and Hans Lenk. (Zeitsch. der deutsch. geol. Gesell., Band xliv, Heft 2, pp. 303–324. 1892.) Various species mentioned.

Vertebrate Fauna of Equus Beds. E. D. Cope. (American Naturalist, xxiii, 160–165. 1889.)

Mexique, Note sur quelques Echinides du terrain crétacé. M. Cotteau. (Bul. Soc. géol. France, iii, No. 18, 292–299. 1890.)

Meyer, Otto. Fish Otoliths of Southern Old-Tertiary. (American Naturalist, Vol. xxiii, pp. 42–43. Philadelphia, 1889.) Criticism of an article by E. Koken on Neue Untersuchungen an tertiären Fisch-Otolithen: Zeitsch. d. deutsch. geol. Gesell., p. 274, 1888.

Meyer, Otto. Upper Tertiary Invertebrates from West Side of Chesapeake Bay. (Proc. Acad. Nat. Sci., Phila., vol. xl, pp. 170–171. Philadelphia, 1888.) Notes on several species, with a description of *Aligena sharpi* as new.

Michigan.

Bryozoa, Paleozoic. E. O. Ulrich. (Geological Sur. Illinois, viii, 283–688. 1890.) Descriptions of new species.

Characters of Diphyphyllum Simcoense (Bill.) Rom. W. H. Sherzer. (American Geologist, iv, 93–95. 1889.)

Fishes, Paleozoic of North America. J. S. Newberry. (U. S. Geol. Sur., Mon. xvi, 340 pp. 1889.)

Paleontology of New York. J. Hall and J. M. Clarke. (Nat. Hist. New York, Pal., vii, 236 pp. 1888.)

Revision and Monograph of Genus Chonophyllum. W. H. Sherzer. (Bul. Geol. Soc. America, iii, 253–282. 1892.)

Sponges of Devonian and Carboniferous Systems. E. O. Ulrich. (Geol. Sur. Illinois, viii, 243–251. 1890.) Descriptions of new species.

Syringothyris, Winchell, and its American Species. C. Schuchert. (Ninth Ann. Rep. State Geologist, New York, 1889, 28–38. 1890.)

Micro-Paleontology of Cambro-Silurian Rocks of Canada. A. H. Foord. (Geol. and Nat. Hist. Sur. Canada. Contrib. to Micro. Pal., 26 pp. 1893.)

Micro-Paleontology of Cambro-Silurian Rocks of Canada. E. O. Ulrich. (Geol. and Nat. Hist. Sur. Canada, Micro-Paleontology, Part II, 27-57. 1889.)

Micro-Paleontology, Canadian. T. Rupert Jones. (Geol. and Nat. Hist. Sur. Canada, Micro-Paleontology, Part III, 59-100. 1891.)

Middle Cambrian, New Genera and Species of Fossils. C. D. Walcott. (Proc. U. S. Nat. Mus., XI, 441-446. 1889.)

Middleton Formation of Tennessee, Mississippi, and Alabama; with a Note on Formation at La Grange, Tennessee. J. M. Safford. (American Geologist, IX, 63-64. 1892.) Incidential references to fossils.

Miller, S. A. Lower Carboniferous Crinoids from Missouri. (Bul. Geol. Sur. Missouri, No. 4, 40 pp., 5 plates. Jefferson City, 1891.) The following species are described as new:

Platycrinus boonvillensis.
Platycrinus allophylus.
Platycrinus occidentalis.
Platycrinus pulcellus.
Platycrinus æternalis.
Platycrinus acclivus.
Platycrinus sampsoni.
Platycrinus annosus.
Platycrinus æquiternus.
Platycrinus gorbyi.
Platycrinus absentivus.
Platycrinus pentagonus.
Platycrinus sulcatus.
Platycrinus lautus.
Platycrinus concinnus.
Platycrinus ollicula.
Platycrinus amabilis.
Platycrinus rotundus.
Platycrinus blairi.
Platycrinus broadheadi.
Platycrinus batiola.
Platycrinus brittsi.
Platycrinus carchesium.
Barycrinus boonvillensis.
Barycrinus blairi.
Belemnocrinus sampsoni.
Dichocrinus humburgi.
Dichocrinus parvulus.
Zeacrinus pocillum.
Cyathocrinus boonvillensis.
Poteriocrinus brittsi.
Cyathocrinus sampsoni.
Missouricrinus.
Missouricrinus admonitus.
Synbathocrinus blairi.
Actinocrinus nodosus.
Dorycrinus confragosus.
Zeacrinus commaticus.
Scaphiocrinus boonvillensis.
Scaphiocrinus constrictus.
Rhodocrinus parvus.
Forbesocrinus elegantulus.

Miller, S. A. New Genus of Crinoids from the Niagara Group. (American Geologist, Vol. I, pp. 263-264. Minneapolis, 1888.) The genus Siphonocrinus is described as new.

Miller, S. A. North American Geology and Paleontology. (One volume, 664 pp., Cincinnati, 1890.) This is essentially a new edition of the author's American Paleozoic Fossils, to which has been added figures illustrating the leading genera and a brief sketch of stratigraphy. All the generic and specific names for American fossils heretofore proposed are listed, with references to the place of publication and horizons. The following are given as new names:

Chrispongia faberi.
Chrispongia wenti.
Allocystites gen. nov.
Allocystites hammelli.
Ectenocrinus gen. nov.
Gomphocystites indianaensis.
Holocystites canneus.
Holocystites faberi.
Holocystites hammelli.
Holocystites subglobosus.
Lysocystites gen. nov.
Menocrinus gen. nov.
Platycystites gen. nov.
Platycystites faberi.
Chonetes geinitzanus.
Spirifera cuspidatiformis.
Pleurotomaria kentuckiensis.
Cyrtoceras ashmanni.
Goniatites kentuckiensis.
Goniatites subcircularis.
Nautilus faberi.
Orthoceras iowense.
Allorisma worthenanum.
Clidophorous faberi.
Cuneamya coriformis.
Modiolopsis capax.

Miller, S. A.—Continued.

Modiopsis faberi.
Orthodesma faberi.
Palæoconcha gen. nov.
Palæoconcha faberi.
Pyanomya faberi.
Schizodus mooresi.
Sphenolium gen. nov.
Sphenolium faberi.
Sphenolium richmomdense.
Technophorus gen. nov.
Technophorus faberi.
Faberia gen. nov.
Faberia anomala.
Lichas faberi gen. nov.
Haplotichnus gen. nov.
Haplotichnus indianensis.
Plangtichnus gen. nov.
Plangtichnus erraticus.
Treptichus gen. nov.
Treptichus bifurcus.

Reviewed in Am. Geologist, v, 52–53, 1890; Am. Jour. Sci., (3), xxxix, 67, 1890; also same, xxxviii, 328–329.

Miller, S. A. Paleontology of Indiana. (Geol. Sur. Indiana, Eighteenth Ann. Rep., Paleontology, pp. 257–356, 12 plates. Indianapolis, 1892.) Advance Sheets. The following species are described and figured for the most part as new:

Receptaculites elrodi.
Cystiphyllum greenii.
Amplexus cinctutus.
Microcyclus blairi.
Striatopora gorbyi.
Holocystites amplus.
Æthocystites.
Æthocystites sculptus.
Stribalocystites gorbyi.
Agelacrinus blairi.
Stephanocrinus cornetti.
Platycrinus caducus.
Platycrinus chouteauensis.
Platycrinus colletti.
Rhodocrinus benedicti.
Actinocrinus sedaliensis.
Dorycrinus elegans.
Actinocrinus (?) chouteauensis.
Agaricocrinus sampsoni.
Agariococrinus blairi.
Batocrinus divalis.
Batocrinus icosidactylus.
Batocrinus irregularis.
Steganocrinus benedicti.
Saccocrinus benedicti.
Saccocrinus howardi.
Cylicocrinus.
Cyliocrinus canaliculatus.
Batocrinus comparilis.
Batocrinus brittsi.
Batocrinus decrepitus.
Actinocrinus blairi.
Actinocrinus brittsi.
Eretmocrinus prægravis.
Batocrinus blairi.
Actinocrinus fossatus.
Blairocrinus arrosus.
Blairocrinus bullatus.
Agaricocrinus germanus.
Agaricocrinus chouteauensis.
Cyathocrinus gorbyi.
Cyathocrinus meekanus Shumard.
Scaphiocrinus lyoni.
Scaphiocrinus maniformis.
Barycrinus stellifer.
Melocrinus æqualis.
Gazacrinidæ.
Gazacrinus inornatus.
Cyphocrinus.
Cyphocrinus gorbyi.
Ichthyocrinus greenii.
Lingula parrishi.
Lingula sedaliensis.
Lingula gorbyi.
Lingula vanhornii Miller.
Crania blairi.
Crania greenii.
Rhynchonella colletti.
Rhynchonella kokomoensis.
Terebratula occidentalis.
Athyris ottervillensis.
Athyris brittsi.
Atrypa missouriensis.
Retzia triangularis.
Retzia plicata.
Retzia circularis.
Hyolithes lanceolatus.
Conularia intertexta.
Tryblidium madisonense.
Holopea hubbardi.
Murchisonia hammelli.
Orthoceras cribrosum Geinitz.
Orthoceras colletti.
Orthoceras gorbyi.
Orthoceras franklinense.
Cyrtoceras thompsoni.
Cyrtoceras howardi.
Poterioceras missouriense.

Miller, S. A.—Continued.

Streptodiscus.
Streptodiscus indianensis.
Nautilus toddi.
Metacoceras cavatiforme Hyatt.
Solenochilus blairi.
Goniatites greenii.
Modiolopsis dychii.
Mesothyra gurleyi.
Macrocaris.
Macrocaris gorbyi.

Miller, S. A. Structure, Classification, and Arrangement of American Paleozoic Crinoids into Families. (American Geologist, Vol. VI, pp. 275–286 and 340–357, Minneapolis, 1890.) This is a digression from Wachsmuth and Springer's classification which had lately been published. A new arrangement is proposed chiefly upon the number of plates in the calyx. The "basals" as here designated, however, are sometimes true basals, sometimes plates having entirely different morphological relations. The families recognized are then briefly characterized. Published also in Geol. and Nat. Hist. Dept, Sixteenth Ann. Rep. State Geologist, 1889, pp. 302–326, Indianapolis, 1889. Reviewed in Geological Magazine, Dec., iii, VIII, 78–79, 1891.

Miller, S. A., and Charles Faber. New Species and New Structural Parts of Fossils. (Jour. Cincinnati Soc. Nat. Hist., vol. XV, pp. 79–87, Cincinnati, 1892.) The following described:

Modiolopsis corrugata.
Modiolopsis longa.
Modiolopsis sulcata.
Orthodesma mundum.
Protoscolex magnus.
Cyclocystoides cincinnatiensis.
Holocystites affinis.
Aviculopecten germanus.

Reviewed in American Geologist, x, 316–317, 1892.

Miller, S. A., and W. F. E. Gurley. Description of Some New Genera and Species of Echinodermata from the Coal Measures and Subcarboniferous Rocks of Indiana, Missouri, and Iowa. (Pub. in part Jour. Cincinnati Soc. Nat. Hist., vol. XIII, April, 1890, and completed by the authors in a pamphlet, 60 pp., 10 plates. Cincinnati, 1890.) The following are described and figured:

Eupachycrinidæ fam. nov.
Eupachycrinus magister sp. nov.
Eupachycrinus sphæralis sp. nov.
Ulocrinus, gen. nov.
Ulocrinus buttsi sp. nov.
Ulocrinus kansasensis sp. nov.
Delocrinus gen. nov.
Delocrinus hemisphericus Shumard.
Delocrinus missouriensis sp. nov.
Æsiocrinus gen. nov.
Æsiocrinus ulrichi sp. nov.
Hydreionocrinus pentagonus sp. nov.
Agaricocrinus splendens sp. nov.
Batocrinus marinus sp. nov.
Batocrinus jucundus sp. nov.
Dichocrinus cinctus sp. nov.
Poteriocrinus granilineus sp. nov.
Poteriocrinus crawfordsvillensis sp. nov.
Poteriocrinus verus sp. nov.
Scaphiocrinus manus sp. nov.
Actinocrinus grandis sp. nov.
Taxocrinus subovatus sp. nov.
Forbesocrinus speciosus sp. nov.
Cyathocrinus opimus sp. nov.
Poteriocrinus arcanus sp. nov.
Scaphiocrinus bonoensis sp. nov.
Abrotocrinus gen. nov.
Abrotocrinus cymosus sp. nov.
Goniocrinus gen. nov.
Goniocrinus sculptilis sp. nov.
Batocrinus poculum sp. nov.
Batocrinus facetus sp. nov.
Batocrinus cantonensis sp. nov.
Poteriocrinus scopæ sp. nov.
Poteriocrinus spartarius sp. nov.
Poteriocrinus genista sp. nov.
Poteriocrinus legrandensis sp. nov.
Poteriocrinus cantonensis sp. nov.
Onychocrinus cantonensis sp. nov.
Rhodocrinus sculptus sp. nov.
Rhodocrinus cælatus sp. nov.
Zeacrinus dubius sp. nov.
Scaphiocrinus repertus sp. nov.
Scaphiocrinus bellus sp. nov.
Scaphiocrinus lacunosus sp. nov.

Miller, S. A.—Continued.

Scaphiocrinus præmorsus sp. nov.
Dichocrinus ulrichi sp. nov.
Poteriocrinus subramosus sp. nov.
Scaphiocrinus graphicus sp. nov.
Scaphiocrinus granuliferus sp. nov.
Scaphiocrinus disparalis sp. nov.
Barycrinus princeps sp. nov.
Æsocrinus basilicus sp. nov.
Delocrinus hemisphericus Shumard.
Ulocrinus sp. ?
Eupachycrinus magister Miller & Gurley.
Schoenaster legrandensis sp. nov.
Aganaster gen. nov.
Aganaster (?) sp.
Troostocrinus nitidulus sp. nov.
Archæocidaris legrandensis sp. nov.

Miller, S. A., and W. F. E. Gurley. Description of Some New Genera and Species of Echinodermata from the Coal Measures and Subcarboniferous Rocks of Indiana, Missouri, and Iowa. (Indiana Dept. Geol. and Nat. Hist., Sixteenth Ann. Rep. State Geologist, for 1888, pp. 327–373, 10 plates, Indianapolis, 1889.) Republication of an article first published in part in Jour. Cincinnati Soc. Nat. Hist., vol. XIII, and later completed by the authors in a pamphlet published at Danville in 1890.)

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Minnesota.

Agnostus, North American Species. A. W. Vogdes. (American Geologist, IX, 377–396. 1892.)

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Ostracoda, Lower Silurian, No. 1. E. O. Ulrich. (American Geologist, X, 263–270. 1892.)

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Minnesota—Continued.

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Tiger from Loup Fork Tertiary of Kansas. F. W. Cragin. (Science, XIX, 17. 1892.)

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Neocene Gravels of Island of Marthas Vineyard, Erratic Cambrian Fossils. J. B. Woodworth. (American Geologist, IX, 243–247. 1892.)

Neocene of Nebraska, Perissodactyls from White River. E. D. Cope. (American Naturalist, XXV, 47–49. 1891.)

Neocomian and Gryphæa Pitcheri. J. Marcou. (American Geologist, V, 315–317. 1890.)

Neocomian, Jura and Chalk of Arkansas. J. Marcou. (American Geologist, IV, 357–367. 1889.) Various species of fossils referred to.

Neocomian Shales of Kansas, Cheyenne Sandstone. F. W. Cragin. (American Geologist, VI, 233–238. 1890.) Incidental references to fossils.

Neocomian Shales, Cheyenne Sandstone and. F. W. Cragin. (American Geologist, VII, 179–181. 1891.) Occurrence of characteristic fossils noted.

Neocomian Shales of Kansas and Cheyenne Sandstone. F. W. Cragin. (American Geologist, VII, 23–33. 1891.) Occurrence of characteristic fossils noted.

Neozoic Geology of Southwestern Arkansas. R. T. Hill. (Geol. Sur., Arkansas, Ann. Rep. 1888, II, 127–152. 1889.) In the chapter on the paleontology of Trinity division a number of forms are described as new.

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Lingula triangulata.
Orthis goodwini.
Orthis linneyi.
Pentamerella thusnelda.
Pentamerus complanatus.
Pentamerus globulosus.
Pentamerus knotti.
Pentamerus uniplicatus.
Stricklandinia louisvillensis.
Chonetes subquadrata.
Productella semiglobosa.
Rhynchnella bellaforma.
Rhynchnella gainesi.
Rhynchnella louisvillensis.
Rhynchnella rugæscosta.
Rhynchnella saffordi, var. depressa.
Rhynchnella tenuistriata.
Atrypa calvini.
Atrypa ellipsoida.
Atrypa reticularis, var. niagarensis.
Spirifera byrnesi.
Spirifera davisi.
Spirifera hobbsi.
Spirifera dubia.
Spirifera foggi.
Spirifera knappiana.

Nettleroth, Henry—Continued.

Spirifera macconathii.
Trematospira helena.
Zygospira kentuckiensis.
Platyceras compressum.
Platyceras milleri.
Pleurotomaria arabella.
Pleurotomaria procteri.
Callonema clarki.
Machrocheilus carinatus.
Euomphalus sampsoni.
Clinopistha striata.
Cypricarditus halli.
Paracyclas elongata.
Paracyclas octerlonii.
Modiomorpha charlestownensis.
Nucula herzeri.
Glyptodesma cancellata.

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Reviewed in American Geologist, IV, 58, 59, 1889.

Nevada.

Agnostus, North American Species. A. W. Vogdes (American Geologist, IX, 377-396. 1892.)

Cambrian Fossils, Upper, Description of New Forms. C. D. Walcott. (Proc. U. S. Nat. Mus., XIII, 266-279. 1891.)

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Paleontology of New York. J. Hall and J. M. Clarke. (Nat. Hist. New York, Pal., VII, 236 pp. 1888.)

Syringothyris, Winchell, and its American Species. C. Schuchert. (Ninth Ann. Rep. State Geologist, New York, for 1889, 28-38. 1890.)

New Brunswick.

Agnostus, North American Species. A. W. Vogdes. (American Geologist, IX, 377-396. 1892.)

Entomostraca, Paleozoic Bivalve, North American Species. T. R. Jones. (Ann. and Mag. Nat. Hist., III, 154. 1889.)

Eozoon and Other Low Organisms in Laurentian Rocks at St. John. G. F. Matthew. (Bul. Nat. Hist. Soc. New Brunswick, No. 9, 36-41. 1891.)

Explorations and Surveys in Portions of Northern New Brunswick and Adjacent Areas in Quebec and Maine. L. W. Bailey and W. M. McInnes. (Geol. and Nat. Hist. Sur. Canada, Ann. Rep. 1887, III, Pt. M, 527 pp. 1889.) Mention made of different species.

Fish Remains in Lower Helderberg of New Brunswick. G. F. Matthew. (American Geologist, VIII, 61, 62. 1891.)

Fishes of Devonian Rocks of Canada. J. F. Whiteaves. (Trans. Roy. Soc. Canada, VI, Sec. IV, 17-96. 1888.)

Illustrations of St. John Group, No. VI. G. F. Matthew. (Trans. Roy. Soc. Canada, IX, Sec. IV, 33-65. 1891.)

Organisms of Silurian and Devonian Rocks in Southern New Brunswick. G. F. Matthew. (Trans. Roy. Soc. Canada, VII, Sec. IV, 49-62. 1888.)

Progress of Geological Investigation in New Brunswick. L. W. Bailey. (Trans. Roy. Soc. Canada, VII, Sec. IV, 3-17. 1889.) Incidental references to fossils.

Protolenus, Genus of Cambrian Trilobites. G. F. Matthew. (Bul. Nat. Hist. Soc. New Brunswick, No. 10, 34-37. 1892.)

Psammichnites and the Early Trilobites of the Cambrian Rocks in Eastern Canada. G. F. Matthew. (American Geologist, II, 1-9. 1888.)

Relations between the Geology of Eastern Maine and New Brunswick. L. W. Bailey. (Trans. Roy. Soc. Canada, VII, Sec. IV, 57-68. 1889.) Allusions to various species of fossils.

New Brunswick—Continued.

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Stenotheca, Second Note. G. F. Matthew. (Geological Magazine, Dec. iii, VI, 210, 211. 1889.)

St. John Group, Fauna, Illustrations, No. 5. G. F. Matthew. (Trans. Roy. Soc. Canada, VIII, Sec. IV, 123–166. 1890.)

New Hampshire.

Fossils of Littleton, New Hampshire. R. Pumpelly. (Am. Jour. Sci., (3), XXXV, 79, 80. 1888.) Announcement of the discovery of Niagara fossils on Parker mountain.

Littleton Fossils. (Am. Jour. Sci., (3), XXXV, 255. 1888.) C. H. Hitchcock mentioned as referring the fossils to the Niagara in 1884.

New Jersey.

Artesian Well at Atlantic City, N. J. W. Lewis. (Proc. Acad. Nat. Sci., Philadelphia, XXXIX, 339–342. 1888.) Various species mentioned.

Artesian Wells at Atlantic City, Geology. L. Woolman. (Proc. Acad. Nat. Sci., Philadelphia, XLII, 132–147. 1890.) Incidental references to fossils.

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Fishes and Fossil Plants of Triassic Rocks of New Jersey and Connecticut Valley. J. S. Newberry. (U. S. Geol. Sur., Mon. XIV, 95 pp. 1888.)

Footprints from Jura-Trias of New Jersey. J. Eyerman. (Proc. Acad. Nat. Sci., Philadelphia, XLI, 32, 33. 1889.)

Gasteropoda and Cephalopoda of Raritan Clays and Green Sand Marls of New Jersey. R. P. Whitfield. (U. S. Geol. Sur., Mon. XVIII, 402 pp. 1891.)

Miocene Mollusca of the State of New Jersey. A. Heilprin. (Proc. Acad. Nat. Sci., Philadelphia, XXXIX, 397–405. 1888.)

Revision of Cretaceous Echinoidea of North America. W. B. Clark. (Johns Hopkins Univ. Circulars, No. 87, 75–77. 1891.)

New Locality of Lower Silurian Fossils in the Limestones of Columbia Co., New York. I. P. Bishop. (Am. Jour. Sci., (3), XXXIX, 69, 70. 1890.)

New Mexico.

Dinosauria, Triassic, New Genus. E. D. Cope. (American Naturalist, XXIII, 626. 1889.)

Eocene Mammals (Mesodactyla). O. C. Marsh. (Am. Jour. Sci., (3), 445–449. 1893.)

Mesozoic Series of New Mexico. J. Marcou. (American Geologist, IV, 155–165 and 216–229. 1889.) Various species of fossils referred to.

Vertebrate Fauna of Puerco Epoch. E. D. Cope. (American Naturalist, XXII, 161–163. 1888.)

New Mexico, Mesozoic Series. J. Marcou. (American Geologist, IV, 155–165 and 216–229. 1889.) Various species of fossils referred to.

New or Little Known Saurian from the Benton of Kansas. F. W. Cragin. (American Geologist, II, 404–407. 1888.)

New Species from Rocks at Fort Cassin, Vermont. R. P. Whitfield. (Bul. Am. Mus. Nat. Hist., III, 26–39. 1890.)

New York.

Archæocyathus, Billings, and other Genera Allied thereto or Associated there with from Cambrian Strata of North America, Spain, Sardinia, and Scotland. J. G. Hinde. (Can. Rec. Sci., III, 373, 374. 1889.)

Asaphus Canalis, Conrad, Additional Notes. R. P. Whitfield. (Bul. Am. Mus. Nat. Hist., II, No. 2, 64, 65. 1889.)

Beecherella: New Genus of Lower Helderberg Ostracoda. E. O. Ulrich. (American Geologist, VIII, 197–204. 1891.)

Bronteus in Chemung Rocks of New York. J. M. Clarke. (State Mus. Nat. Hist. New York, Forty-second Ann. Rep., 405, 406. 1889.) Incidental references.

Bryozoa, Descriptions. J. Hall. (Tenth Ann. Rep. State Geologist, New York, for 1890, 35–57. 1891.)

Calceocrinidæ; Revision of Family, with Descriptions of Some New Species. E. N. S. Ringueberg. (Ann. New York Acad. Sci., IV, 20 pp. 1889.)

Calciferous Formation in Champlain Valley. E. Brainard and H. M. Seely. (Bul. Am. Mus. Nat. Hist., III, 1–23. 1890.) Various species mentioned.

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Chemung Rocks, Genus Bronteus in New York. J. M. Clarke. (Eighth Ann. Rep. State Geologist New York, for 1889, 57–60. 1889.)

Chonophyllum, Revision and Monograph. W. H. Sherzer. (Bul. Geol. Soc. America, III, 253–282. 1892.)

Crinoidea of Lower Limestone at Lockport, N. Y., with Descriptions of New Species. E. N. S. Ringueberg. (Ann. N. Y. Acad. Sci., V, 301. 1890.)

Crustaceous Tracks from Potsdam Sandstone of Port Henry, N. Y. J. Hall. (New York State Mus. Nat. Hist., Forty-second Ann. Rep., 25–34. 1889.)

Cuboides Zone and Its Fauna: A Discussion of Methods of Correlation. H. S. Williams. (Bul. Geol. Soc. America, I, 481–500. 1890.)

Devonian Faunas, Genesee Section of New York. H. S. Williams. (U. S. Geol. Sur., Bul. 41, 121 pp. 1888.)

Devonian System of North and South Devonshire. H. S. Williams. (Am. Jour. Sci., (3), XXXIX, 31–38. 1890.) Incidental references to fossils.

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Fauna of Lower Cambrian or Olenellus Zone. C. D. Walcott. (U. S. Geol. Sur., Tenth Ann. Rep., 511–658. 1890.)

Fauna with Goniatites Intumescens, Beyrich, in Western New York. J. M. Clarke. (American Geologist, VII, 86–105. 1891.)

New York—Continued.

Fenestellidæ, Lower Helderberg, Description of New Species with explanations of plates illustrating Species of the Hamilton Group, Described in the Report of the State Geologist for 1886. (New York State Mus. Nat. Hist., Forty-first Ann. Rep., 393, 394. 1888.)

Fishes, Paleozoic, of North America. J. S. Newberry. (U. S. Geol. Sur., Mon. XVI, 340 pp. 1889.)

Fossils from Niagara Group of Western New York. E. N. S. Ringueberg. (Proc. Acad. Nat. Sci., Phila., XL, 131-137. 1888.)

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Geology of Skunnemunk Mountain, Osage County, New York. C. S. Prosser. (Trans. New York Acad. Sci., XI, 132-149. 1892.) Fossils mentioned.

Geology of Southeastern New York. G. D. Harris. (American Geologist, VII, 164-178. 1891.) Numerous references to fossils.

Hamilton of Chenango and Otsego Counties, New York. C. S. Prosser. (Proc. Am. As. Adv. Sci., XXVI, 210. 1888.) Abstract. Various species mentioned.

Haplocrinus, Ventral Structure of Taxocrinus, and Consequent Modifications in Classification of Crinoidea. C. Wachsmuth and F. Springer. (Proc. Acad. Nat. Sci., Phila., XL, 337-363. 1888.)

Hudson River "Fiord." A. M. Edwards. (Am. Jour. Sci., (3), XLIII, 182, 183. 1892.)

Hudson River Tunnel, Common Edible Crab found Fossil. R. P. Whitfield. (Science, XVIII, 300. 1891.)

Inarticulate Brachiopod from Trenton Limestone. C. D. Walcott. (U. S. Nat. Mus., Proc., XII, 365, 366. 1889.)

Inarticulate Brachiopodous Shell. R. P. Whitfield. (Bul. American Mus. Nat. Hist., III, 121, 122. 1890.)

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Marcellus Epoch in State of New York, Species Constituting Known Fauna and Flora. J. M. Clark. (New York State Cab. Nat. Hist., Forty-second Ann. Rep., 406, 407. 1889.)

Marcellus Epoch in State of New York, List of Species Constituting the Known Fauna and Flora. J. M. Clarke. (Eighth Ann. Rep. State Geologist, for 1889, 60-62. 1889.)

Marcellus Shale of New York, Balanoid Cirripede. R. P. Whitfield. (Bul. Am. Mus. Nat. Hist., II, No. 2, 66-68. 1889.)

Mastodon Remains on New York Island. R. P. Whitfield. (Science, XVIII, 342. 1891.)

Mount Bob, Mount Ida, or Snake Hill. T. W. Harris. (Am. Jour. Sci., (3), XLIII, 236-238. 1892.)

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Niagara Shales of Western New York; Study of Origin of their Subdivisions and their Faunæ. E. N. S. Ringueberg. (American Geologist, I, 264-272. 1888.)

Ophiolite of Thurman, Warren County, N. Y., with remarks on Eozoon Canadense. G. P. Merrill. (Am. Jour. Sci., (3), XXXVII, 189-191. 1889.)

Original Chazy Rocks. E. Brainard and H. M. Seely. (American Geologist, II, 323-330. 1888.) Mention made of different species.

New York—Continued.

Oriskany Fauna of Columbia County, New York; with an Annotated list of Fossils. J. M. Clarke. (Am. Jour. Sci., (3), xliv, 410–414. 1892.)

Oriskany Sandstone of Maryland, New York, and Ontario, List of Fossils. C. Schuchert. (Eighth Ann. Rep. State Geologist New York, for 1889, 50–56. 1889.)

Paleontology of Cretaceous Formation on Staten Island. A. Hollick. (Trans. N. Y. Acad. Sci., xi, 96–103, 1892.)

Paleontology of New York. J. Hall. (Nat. Hist. New York, Pal., v, Pt. ii, 278 pp. 1888.)

Paleontology of New York. J. Hall and J. M. Clarke. (Nat. Hist. New York, Pal., vii, 236 pp. 1888.)

Paleontology of New York, Vol. vii, Notice. J. Hall. (Eighth Ann. Rep. State Geologist New York, for 1889, 7–24. 1889.)

Paleozoic Ostracoda from North America, Wales and Ireland. T. R. Jones. (Quart. Jour. Geol. Soc., London, xlvi, 2–31. 1890.)

Platyogonus, an Extinct Genus allied to the Peccaries. J. Leidy. (Trans. Wagner Free Inst. Sci., ii, 41–50. 1889.)

Position of Catskill Group. C. S. Prosser. (American Geologist, vii, 351–368. 1891.) Occurrence of characteristic fossils noted.

Silurian Horizons, Correlation, of Tennessee and of Ohio and Mississippi Valleys with those of New York and Canada. E. O. Ulrich. (American Geologist, i, 100–110, 174–190, and 305–315. 1888.) Various species of fossils referred to.

Silurian Horizons, Correlation, of Tennessee and of Ohio and Mississippi Valleys with those of New York and Canada. E. O. Ulrich. (American Geologist, ii, 39–44. 1888.) Various species of fossils referred to.

Staten Island, New York, Cretaceous and Triassic Fossils. (American Naturalist, xxiii, 1032–1037. 1889.) Note from the Proc. Nat. Sci. Assoc. of Staten Island.

Taconic limestone, Western, Fossils in Eastern Part of Dutchess Co., N. Y. W. B. Dwight. (American Jour. Sci., (3), xxxix, 71. 1890.)

Taconic System of Emmons and Use of Name Taconic in Geologic Nomenclature. C. D. Walcott. (Am. Jour. Sci., (3), xxxv, 229–242. 1888.) Incidental reference to the fossils.

Terataspis Grandis, Hall, the Largest Known Trilobite. J. M. Clarke. (Tenth Ann. Rep. State Geologist New York, for 1890, 87–90. 1891.)

Value of Term "Hudson River Group" in Geologic Nomenclature. C. D. Walcott. (Bul. Geol. Soc. America, i, 335–356. 1890.) Incidental references to fossils.

Wappinger Valley Limestone and Other Formations of Dutchess Co., N. Y. W. B. Dwight. (Am. Jour. Sci., (3), xxxciii, 139–153 1889.) Various fossils considered.

Newberry, J. S. Catalogue of British Fossil Vertebrata; by Woodward and Sherborn. (Am. Jour. Sci., (3), Vol. xxxix, pp. 402, 403. 1890.) A short notice of the work.

Newberry, J. S. Fossil Fishes and Fossil Plants of the Triassic Rocks of New Jersey and the Connecticut Valley. (U. S. Geol. Sur., Mon. xiv, 95 pp., 26 plates. Washington, 1888.) The following species of fish are figured and described:

Ischypterus.
Ischypterus ovatus W. C. R.
Ischypterus marshii W. C. R.
Ischypterus agassizi W. C. R.
Ischypterus micropterus sp. nov.
Ischypterus tenuiceps Agassiz.
Ischypterus fultus Agassiz.
Ischypterus robustus sp. nov.
Ischypterus elegans sp. nov.
Ischypterus alatus sp. nov.
Ischypterus modestus sp. nov.
Ischypterus lenticularis sp. nov.
Ischypterus lineatus sp. nov.
Ischypterus macropterus W. C. R.
Ischypterus braunii sp. nov.
Ischypterus parvus W. C. R.
Ischypterus latus J. H. R.
Ischypterus minutus sp. nov.

Newberry, J. S.—Continued.

Ischypterus gigas sp. nov.
Catopterus.
Catopterus redfieldi Egerton.
Catopterus gracilis J. H. R.
Catopterus minor sp. nov.
Catopterus ornatus sp. nov.
Catopterus anguilliformis W. C. R.
Catopterus parvulus W. C. R.
Dictyopyge.
Dictyopyge macrura Egerton.
Ptycholepis.
Ptycholepis marshii Newb.
Acentrophorus.
Acentrophorus chicopensis sp. nov.
Diplurus Newb.
Diplurus longicaudatus Newb.

Reviewed in Am. Geologist, IV, 187, 188, 1889; also Am. Jour. Sci., (3,) XXXVIII, 77, 78, 1889; and Nature, XLII, 366, 367, 1890.

Newberry, J. S. Fossil Fishes of Erie Shale of Ohio. (Trans. N. Y. Acad. Sci., Vol. VII, pp. 178-180. New York, 1888.) Abstract. The following new species and genera are described from the top of the formation in the valley of the Cuyahoga, near Cleveland:

Cladodus kepleri.
Actinophorus.
Actinophorus clarkii.
Dinichthys curtus.
Dinichthys tuberculatus.

Newberry, J. S. Laramie Group. (Bul. Geol. Soc. America, Vol. I, pp. 524-527. New York, 1890.) A brief discussion of the group with references to fossils.

Newberry, J. S. Paleozoic Fishes of North America. (U. S. Geol. Sur., Mon. XVI, 340 pp., 53 plates. Washington, 1889.) Descriptions of the genera and species from the American Paleozoic which have been heretofore described by the author. The following species described and figured:

Acantholepis pustulosus sp. nov.
Acanthaspis armatus Newb.
Machæracanthus major Newb.
Machæracanthus peracutus Newb.
Machæracanthus sulcatus Newb.
Asterosteus stenocephalus Newb.
Rhynchodus secans Newb.
Rhynchodus frangens Newb.
Rhynchodus crassus Newb.
Rhynchodus excavatus Newb.
Rhynchodus greenei sp. nov.
Dinichthys precursor sp. nov.
Coccosteus occidentalis Newb.
Onychodus sigmoides Newb.
Dinichthys hertzeri Newb.
Heteracanthus gen. nov.
Heteracanthus politus sp. nov.
Ctenacanthus wrighti Newb.
Goniodus gen. nov.
Goniodus hertzeri sp. nov.
Callognathus gen nov.
Callognathus regularis sp. nov.
Callognathus serratus sp. nov.
Onychodus ortoni sp. nov.
Aspidichthys clavatus Newb.
Heliodus lesleyi Newb.
Dipterus (Ctenodus) nelsoni sp. nov.
Dipterus (Ctenodus) flabelliformis sp. nov.
Dipterus (Ctenodus) levis sp. nov.
Dipterus (Ctenodus) minutus sp. nov.
Sphenophorus nov. gen.
Sphenophorus lilleyi sp. nov.
Holonema nov. gen.
Holonema rugosa Claypole.
Ganorhynchus beecheri sp. nov.
Phyllolepis delicatula sp. nov.
Dinichthys tuberculatus sp. nov.
Onychodus hopkinsi Newb.
Holoptychius? pustulosus sp. nov.
Holoptychius granulatus sp. nov.
Holoptychius tuberculatus sp. nov.
Holoptychius giganteus? Ag.
Helodus gibberulus Ag.
Cladodus carinatus sp. nov.
Cladodus kepleri sp. nov.
Ctenacanthus randalli sp. nov.
Bothriolepis leidyi sp. nov.
Bothriolepis minor sp. nov.
Holoptychinus americanus Leidy.
Holoptychius? radiatus sp. nov.
Holoptychius hallii sp. nov.
Glyptopomus sayrei Newb.
Dipterus (Ctenodus) sherwoodi Newb.
Dipterus (Ctenodus) radiatus sp. nov.
Gyracanthus sherwoodi sp. nov.
Titanichthys agassizii Newb.
Titanichthys clarkii Newb.

ewberry, J. S.—Continued.

Dinichthys minor Newb.
Dinichthys gouldii sp. nov.
Dinichthys corrugatus sp. nov.
Dinichthys intermedius sp. nov.
Dinichthys curtus sp. nov.
Glyptaspis gen. nov.
Glyptaspis verrucosus sp. nov.
Diplognathus mirabilis Newb.
Mylostoma terrelli Newb.
Mylostoma variabilis Newb.
Trachosteus gen. nov.
Trachosteus clarkii sp. nov.
Ctenacanthus compressus Newb.
Ctenacanthus clarkii sp. nov.
Hoplonchus parvulus Newb.
Cladodus concinnus Newb.
Cladodus tumidus sp. nov.
Ctenodus wagneri sp. nov.
Phœbodus politus sp. nov.
Actinophorus gen. nov.
Actinophorus clarkii sp. nov.
Asteroptychius elegans sp. nov.
Gyracanthus inornatus sp. nov.
Cladodus romingeri Newb.
Mazodus gen. nov.
Mazodus kepleri sp. nov.
Ctenacanthus angustus sp. nov.
Cœlosteus gen. nov.
Cœlosteus ferox sp. nov.
Rhizodus anceps sp. nov.
Stethacanthus gen. nov.
Labodus marginatus sp. nov.
Physonemus stellatus sp. nov.
Orthopleurodus carbonarius N. & W.
Ctenacanthus littoni sp. nov.
Ctenacanthus cylindicus sp. nov.
Harpacanthus fimbriatus Stock.
Sandalodus crassus.
Orodus ramosus Ag.
Acondylacanthus occidentalis N. & W.
Antliodus arcuatus sp. nov.
Polyrhizodus littoni N. & W.
Psammodus glyptus St. J. & W.
Edestus giganteus sp. nov.
Ctenodus serratus Newb.
Ctenodus ohioensis Cope.

Reviewed in Am. Naturalist, XXIV, 844–847, 1890; also Am. Geologist, VI, 323, 1890; and Nature, XIII, 146–147, 1890.

ewberry, J. S. Rhizodus from St. Louis Limestone at Alton, Ill. (Trans. N. Y. Acad. Sci., Vol. VII, p. 165. New York, 1888.) *Rhizodus anceps* described.

ewberry, J. S. Structure and Relation of Edestus with Description of a Gigantic New Species. (Ann. N. Y. Acad. Sci., Vol. IV, pp. 113–122, 3 plates. New York, 1888.) The following described:

Edestus giganteus sp. nov.
Edestus vorax Leidy.
Edestus minor Newb.
Edestus heinrichsii N. & W.
Edestus davisii Woodward.

wberria, New Genus of Brachiopods, with Remarks on its Relations to Rensselæria and Amphigenia. J. Hall. (Tenth Ann. Rep. State Geologist New York, for 1890, 91–98. 1891.)

wfoundland.

Cambrian, Lower, or Olenellus Zone of North America, Descriptive Notes of New Genus and Species. C. D. Walcott. (Proc. U. S. Nat. Mus., XII, 33–46. 1890.)

Fauna of Lower Cambrian or Olenellus Zone. C. D. Walcott. (U. S. Geol. Sur., Tenth Ann. Rep., 511–658. 1890.)

Taconic of Eastern Newfoundland. J. P. Howley. (American Geologist, IV, 121–125. 1889.) Numerous references to fossils.

well, F. H. Niagara Cephalopods from Northern Indiana. (Proc. Bost. Soc. Nat. Hist., Vol. XXIII, pp. 466–486. Boston, 1888.) The following noted:

Orthoceras crebescens H.
Orthoceras unionensis Worth.
Orthoceras rigidum H.
Orthoceras obstructum n. sp.
Kinoceras columnare.
Kinoceras strix.
Kinoceras angulatum.
Gomphoceras wabashensis n. sp.
Gomphoceras linearis n. sp.
Gomphoceras projectum n. sp.
Hexameroceras delphicolum n. sp.
Hexameroceras cacabiformis n. sp.
Pentameroceras mirum.
Ascoceras newberryi Billings.
Ascoceras indianensis n. sp.

Reviewed by Neues Jahrbuch, 178, 1892.

Niagara Age of Indiana Rocks. C. S. Beachler. (American Geologist, IX, 408-409, 1892.) Incidental references to fossils.

Niagara Cephalopods from Northern Indiana. F. H. Newell. (Proc. Bost. Soc. Nat. Hist., XXIII, 466-486. 1888.)

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Maquoketa Shales in Iowa. J. F. James. (Proc. Am. As. Adv. Sci., XXXVIII, 250, 251. 1890.) References made to various species.

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Pumpelly, Raphael. Fossils of Littleton, N. H. (Am. Jour. Sci., (3), Vol. XXXV, pp. 79, 80. New Haven, 1888.) Announcement of the discovery of Niagara fossils on Parker Mountain.

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Quaternary Section Eight Miles Southeast of Des Moines, Iowa. C. R. Keyes and R. E. Call. (Proc. Iowa Acad. Sci., I, Pt. II, 30. 1892.)

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Linnarssonia cnf. Pretiosa Billings. J. Hall. (Trans. Roy. Soc. Canada, VII, Sec. IV, 55. 1890.)

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Rauff, H. Sponges, Siluro-Cambrian at Little Metis on the St. Lawrence; by J. W. Dawson: Trans. Roy. Soc. Canada. Review. (Neues Jahrbuch, pp. 458-460. 1892.)

Rauff, H. Sponges from Utica Shale Formation (Ordovician) at Ottawa, Canada; by G. J. Hinde: Geological Magazine, Dec. iii, Vol. VIII, 1891. Review. (Neues Jahrbuch, p. 465. 1892.)

Rauff, H. Ueber Palæospongia Prisca, Bornem, Eophyton, z. Th., Chondrites Antiguus, Haliserites, z. Th., und ähnliche Gebilde. (Neues Jahrbuch f. Min., Geol. u. Pal., pp. 92-104. 1891.) These bodies are not regarded as organic but thought to originate by mechanical causes. *Palæophycus beverlegensis* Bill. is probably identical with *Chondrites antiguus*.

Reconnaissance in Buchanan County, Iowa. S. Calvin. (Bul. Lab. Nat. Hist. State Univ. Iowa, II, No. 12, 177-189. 1892.) Incidental references to fossils.

Reconnaissance in Southwestern Kansas. R. Hay. (Bul. U. S. Geol. Sur., No. 57, 49 pp. 1890.) Incidental references to fossils.

Reconnaissance of Ouachita Mountain System in Indian Territory; by R. T. Hill. (Am. Jour. Sci., (3), XLII, 111-124. 1890.) Numerous references to fossils.

Red **Quartzites** of Minnesota, Lingula and Paradoxides. N. H. Winchell. (Bul. Minnesota Acad. Nat. Sci., iii, 103–106. 1889.)

Rejoinder to Mr. C. D. Walcott. C. Rominger. (American Geologist, ii, 356–359. 1888.) Mention made of different species.

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Relations of Carettodiclys, Ramsey. G. Baur. (American Naturalist, xxvi, 631–639. Philadelphia, 1892.)

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Remarks on Prof. H. S. Williams' Address on Scope of Paleontology and its Value to Geologists, before Section E, A. A. A. S., Aug., 1892. J. Marcou. (American Geologist, x, 257–260. 1892.)

Report on Department Invertebrate Fossils Meso-Cenozoic in the U. S. National Museum, 1885. C. A. White. (Report Smithsonian Inst., 1885 (1886), Part ii, p. 133. Washington, 1888.)

Report on Department Invertebrate Fossils (Paleozoic) in the U. S. National Museum, 1885. C. D. Walcott. (Rep. Smithsonian Inst., 1885 (1886), Part ii, pp. 129–132. Washington, 1888.)

Reptiles, Dinosaurian, Description. O. C. Marsh. (Am. Jour. Sci., (3), xxxix, 81–86. 1890.)

Reptilia, Homologies of Cranial Arches. E. D. Cope. (American Naturalist, xxvi, 407–408. 1892.)

Reptilia, Homologies of Posterior Cranial Arches. E. D. Cope. (Trans. Am. Philos. Soc., xvii, 942–944. 1892.)

Restoration of Brontops Robustus from Miocene of America. O. C. Marsh. (Am. Jour. Sci., (3), xxxvii, 163–165. 1389.)

Restoration of Mastodon Americanus, Cuvier. O. C. Marsh. (Am. Jour. Sci., (3), xliv, 350. 1892.)

Restoration of Triceratops. O. C. Marsh. (Am. Jour. Sci., (3), xli, 339–342. 1891.)

Restoration of Stegosaurus. O. C. Marsh. (Am. Jour. Sci., (3), xlii, 179–181. 1891.)

Restorations of Claosaurus and Ceratosaurus. O. C. Marsh. (Am. Jour. Sci., (3), xliv, 343–349. 1882.)

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Review of Progress of American Invertebrate Paleontology for 1888. C. R. Keyes. (American Naturalist, xxiv, 131–138. 1890.)

Revision and Monograph of Genus Chonophyllum. W. H. Sherzer. (Bul. Geol. Soc., America, iii, 253–282. 1892.)

Revision of Family Calceocrinidæ with Descriptions of Some New Species. E. N. S. Ringueberg. (Ann. New York Acad. Sci., iv, 20 pp. 1889.)

Revision of Generic and Great Groups of the Echinodermata. M. P. Duncan. (Jour. Linnæan Soc., xxiii, 1–311. 1890.)

Revision of Species Monticuliporoid Corals of Cincinnati Group. J. F. James. (Proc. Am. As. Adv. Sci., xxxvi, 223. 1888.)

Revision of Species of Coryphodon. C. Earle. (Bul. American Mus. Nat. Hist., iv, 149–166. 1892.)

Ringueberg, Eugene N. S. Calceocrinidæ: A Revision of the Family, with Descriptions of Some New Species. (Ann. New York Acad. Sci., Vol. IV, pp. 388–408, 2 plates. New York. 1889.) The following genera and species described:

Castocrinus gen. nov.
Castocrinus furcillatus W. R. Billings.
Castocrinus rugosus W. R. Billings.
Castocrinus billingsianus, sp. nov.
Castocrinus articulosus E. Billings.
Castocrinus inæqualis E. Billings.
Proclivocrinus gen. nov.
Proclivocrinus radiculus Ringueberg.
Proclivocrinus chrysalis Hall.
Calceocrinus Hall.
Calceocrinus typus sp. nov.
Calceocrinus halli sp. nov.
Calceocrinus bidentatus sp. nov.
Calceocrinus contractus sp. nov.

Ringueberg, Eugene N. S. Crinoidea of Lower Limestone at Lockport, N. Y., with Descriptions of New Species. (Ann. New York Acad. Sci., Vol. v, p. 301. New York, 1890.) Reviewed in American Geologist, VI, 250, 1890.

Ringueberg, Eugene N. S. Niagara Shales of Western New York; A Study of the Origin of Their Subdivisions and Their Faunæ. (American Geologist, Vol. I, pp. 264–272. Minneapolis, 1888.) Numerous references to fossils. Reviewed in Am. Naturalist, XXII, 637, 1888.

Ringueberg, Eugene N. S. New Species of Fossils from the Niagara Shales of Western New York. (Proc. Acad. Nat. Sci., Phila., Vol. XL, pp. 131–147, 1 plate. Philadelphia, 1888.) The following new species are described and figured:

Buthotrepis gregaria.
Inocaulis anastomotica.
Dendrocrinus celsus.
Mariacrinus warreni.
Orthis acutiloba.
Hyolites subimbricatus.
Plumulites gracilissimus.

Reviewed in Neues Jahruch, 154, 1892.

Rhinoceras, Hippotherium and, from Florida. J. Leidy. (Proc. Acad. Nat. Sci., Phila., XLII, 182, 183. 1890.)

Rhizodus from St. Louis Limestone at Alton, Ill. J. S. Newberry. (Trans. N. Y. Acad. Sci., VII, 165. 1889.)

Rhode Island.

Carboniferous Flora and Fauna of Rhode Island. A. S. Packard. (Am. Jour. Sci., (3), XXXVII, 411. 1889.)

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Rhynchopora of North America, Tertiary. S. H. Scudder. (Proc. Boston Soc. Nat. Hist., XXV, 370–386. 1892.)

Rockford Shales, Notes. C. L. Webster. (American Naturalist, XXII, 444–446. 1888.) Incidental references to fossils.

Rockford Shales of Iowa, Fossils. C. L. Webster. (American Naturalist, XXII, 1012–1015. 1888.) Descriptions of certain species, some of which are regarded as new.

Rocks, Fossils from Devonian, of the Island, Shores or Immediate Vicinity of Lakes Manitoba and Winnepegosis. J. F. Whiteaves. (Geol. and Nat. Hist. Sur. Canada, Contributions to Canadian Paleontology, I, 255–360. 1892.)

Rocks of St. Paul, Indiana, and Vicinity. C. S. Beachler. (American Geologist, VII, 178–179. 1891.) Numerous references to fossils.

Rodentia. Mechanical Causes of Origin of Dentition. E. D. Cope. (American Naturalist, XXII, 3–13. 1888.)

Roemer, Fred. Macraster, eine neue Spatangoiden-Gattung aus der Kreide von Texas. (Neues Jahrbuch f. Min., Geol. u. Pal., pp. 191–195, 1 tafel. 1888.) Describes Macraster as a new genus with *M. texanus* n. sp. as the type from the Cretaceous of Georgetown, Texas.

Roemer, Fred. Ueber die Gattungen Pasceolus und Cyclocrinus. (Neues Jahrbuch f. Min., Geol. u. Pal., pp. 74–75. 1888.) Having received specimens of *Pasceolus billingsi* from the Lower Silurian of Clinton, Iowa, concludes that generically Pasceolus and Cyclocrinus are synonymous. Cyclocrinus is accepted since it is the oldest name.

Rœmeria, Edwards and Haime and the Genus Caliapora, Schlüter, Relations between the Genera Syringolites. H. A. Nicholson. (Geological Magazine, Dec. iii, vi, 433–438. 1889.)

Rolfe, Charles W. Characters and Distribution of the Genera of Brachiopoda. (American Naturalist, Vol. xxiii, pp. 983–998. Philadelphia, 1889.) A classification based largely on external characters.

Rominger, C. Rejoinder to Mr. C. D. Walcott. (American Geologist, Vol. ii, pp. 356–359. Minneapolis, 1889.) A discussion of the Mt. Stephens fauna.

Rominger, C. Studies on Monticulipora. (American Geologist, Vol. vi, pp. 102–121. Minneapolis, 1890.) A critical consideration of the group and its structural characters. It is primarily a criticism of Ulrich's recent work.

Rominger, C. Typical Chætetes in the Devonian Strata at the Falls of the Ohio and likewise in the Analogous Beds of the Eifel in Germany. (American Geologist, Vol. x, pp. 56–63, 1 plate. Minneapolis, 1892.) The differentiation of the old group into other generic types is briefly described with leading structural features. It is shown that the typical genus is found geologically much lower than has heretofore been supposed.

Rowley, R. R. Chouteau Group of Eastern Missouri. (American Geologist, Vol. iii, pp. 111–116. Minneapolis, 1889.) List of typical forms given.

Rowley, R. R. Description of a New Species of Burlington Crinoid. (American Geologist, Vol. v, pp. 146–147. Minneapolis, 1890.) *Batocrinus Calvini* described and figured from Missouri.

Rowley, R. R. Natural Casts of Crinoids and Blastoids from the Burlington Limestone. (American Geologist, Vol. vi, pp. 66–67. Minneapolis, 1890.) Brief notes on certain species of crinoids.

Rowley, R. R. Three Kinderhook Fossils. (American Geologist, Vol. iii, pp. 275–276. Minneapolis, 1889.) Some observations on *Zaphrentis caleola, Porcellia nodosa* and *Batocrinus pistiliformis.*

Rugose Corals, Chart. W. H. Sherzer. (American Geologist, vii, 273–301. 1891.)

Russell, F. W. Geology of Central Nebraska. (American Geologist, Vol. vii, pp. 38–44. Minneapolis, 1891.) Numerous references to fossils.

Russell, F. W. Nebraska Tertiary. (American Geologist, Vol. ix, pp. 178–181. Minneapolis, 1892.) Incidental references to fossils.

Russell, I. C. Expedition to Mount St. Elias in Summer of 1890. (Nat. Geog. Mag., Vol. iii, 200. pp. Washington, 1891.) Incidental references to fossils.

Rüst, D. Radolaria from the Pierre formation of Northwestern Manitoba. (Geol. and Nat. Sur. Canada, Contributions to Canadian Micro-Paleontology, iv, pp. 101–110, 3 plates, Ottawa. 1892.) After a short introduction by J. B. Tyrrell, the following species are described:

Caryosphæra æquidistans sp. nov.
Cenellipsis hexagonalis sp. nov.
Prunulum calococcus sp. nov.
Crytocalpis crassitestata sp. nov.
Dictyocephalus microstoma sp. nov.
Dictyocephalus macrostoma sp. nov.
Theocampe sphærocephala sp. nov.
Tricolocapsa salva, Rust.
Tricolocapsa thoracica sp. nov.
Tricolocapsa dowlingi sp. nov.
Tricolocapsa selwyni sp. nov.
Dictyomitra canadensis sp. nov.
Dictyomitra polypora Zittel.
Dictyomitra multicostata Zittel.
Stichocapsa tyrrelli sp. nov.
Stichocapsa dawsoni sp. nov.

Saccamina Eriana. J. W. Dawson. (Am. Jour. Sci., (3), XXXVII, 318. 1889.)

Safford, James M. Exhibition of Certain Bones of Megalonyx, not before Known. (Proc. Am. As. Adv. Sci., Vol. XL, p. 289. Salem, 1892.) Abstract. Notes on the discovery of Megalonyx at Big Cave, Tenn. Reviewed in Geol. Mag., (iii,) VIII, 504, 1891.

Safford, James M. Middleton Formation of Tennessee, Mississippi and Alabama; with a Note on the Formation at La Grange, Tenn. (American Geologist, Vol. IX, pp. 63-64. Minneapolis, 1892.) Numerous references to fossils.

Safford, James M. Pelvis of a Megalonyx; and other Bones from Big Bone Cave, Tennessee. (Bul. Geol. Soc. America, Vol. III, pp. 121-123. 1892.) A historical note on various collections of bones.

Safford, James M., and A. W. Vogdes. Description of New Species of Fossil Crustacea from the Lower Silurian of Tennessee, with remarks on others not well known. (Proc. Acad. Nat. Sci., Phila., Vol. XLI, pp. 166-168. Philadelphia, 1889.) The following species described and figured:

Ampyx americanus sp. nov.
Chasmops troosti Safford.
Eocrinus varicostatus Walcott.

Reviewed in Neues Jahrbuch, 440, 1890.

Saint John Group, Illustrations of Fauna. G. F. Matthew. (Trans. Roy. Soc. Canada, VIII, Sec. IV, 123-166. 1890.)

Saint John Group, Illustrations of Fauna, No. VI. G. F. Matthew. (Trans. Roy. Soc. Canada, IX, Sec. IV, 33-65. 1891.)

Saint Paul, Indiana, and Vicinity, Rocks. C. S. Beachler. (American Geologist, VII, 178, 179. 1891.) · Numerous references to fossils.

Saint Peter Sandstone, Fossils. F. W. Sardeson. (Bul. Minnesota Acad. Sci., III, 318, 319. 1891.)

Salter and Hicks, Classification of; How is Cambrian Divided? G. F. Matthew. (American Geologist, VI, 139, 140. 1889.) Numerous references to fossils.

Sampson, F. A. Subcarboniferous Series at Sedalia, Missouri. (Trans. New York Acad. Sci., Vol. VII, pp. 246, 247. New York, 1888.) Incidental references to fossils.

Sardeson, F. W. Fossils in Saint Peter Sandstone. (Bul. Minnesota Acad. Nat. Sci., Vol. III, pp. 318, 319. Minneapolis, 1891.) A list of fossils found given.

Sardeson, F. W. Lower Silurian Formations of Wisconsin and Minnesota Compared. (Bul. Minnesota Acad. Nat. Sci., Vol. III, pp. 319-326. Minneapolis, 1891.) Incidental references to fossils.

Sardeson, F. W. Paleozoic Fossils in the Drift. (Bul. Minnesota Acad. Nat. Sci., Vol. III, pp. 317-318. Minneapolis, 1891.) A list of Devonian forms found in the drift.

Sardeson, F. W. Range and Distribution of the Lower Silurian Fauna of Minnesota, with Descriptions of New Species. (Bul. Minnesota Acad. Nat. Sci., Vol. III, pp. 326-343, 2 plates. Minneapolis, 1891.) A tabulated list of the forms and their range is given; with descriptions and figures of the following, as new:

Camarella bernensis.
Camarella owatonnensis.
Crania halli.
Discina concordensis.
Leptæna minnesotensis.
Leptæna paræcosis.
Leptæna recedens.
Leptæna saxea.
Orthis corpulenta.
Orthis macrior.
Orthis rugata.
Orthis tersus.
Orthis minnesotensis.
Orthis petrea.
Productella minneapolis.
Rhynchonella minnesotensis.
Rhynchonella sancta.
Skenidium anthonensis.
Strophomena halli.
Strophomena inquassa.
Streptorhynchus subsulcatum.
Zygospira aquila.
Carinaropsis deleta.
Carinaropsis (or Bellerophon) phalera.

Sardeson, F. W.—Continued.

Conchopeltis (or Metoptoma) obtusa.
Fusispira (?) spicula.
Holopea (?) perundosa.
Metoptoma explanata.
Pleurotomaria clivosa.
Tryblidium exertum.
Tryblidium validum.
Cypricardites luculentus.
Cypricardites minnesotensis.
Cypricardites triangularis.
Cypricardites vicinus.
Tillinomya candens.
Tellinomya (or Nucula) lepida.

Reviewed in Am. Jour. Sci., (3), xliii, 539, 1892.

Sardeson, F. W., C. W. Hall and. Palezoic Formations of Southeastern Minnesota. (Bul. Geol. Soc. America, Vol. iii, pp. 331–368, 2 plates. Rochester, 1892.)

Saskatchewan.

Silurian Rocks of Southeastern Portion of District of Saskatchewan, New Species of Fossils. J. F. Whiteaves. (Canadian Rec. Sci., iv, 293-303. 1891.)

Saskatchewan, Silurian Rocks of the Southeastern Portion of the District. J. F. Whiteaves. (Canadian Rec. Sci., v, 293–303. 1891.)

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Syringothyris carteri Hall.
Syringothyris angulata Simpson.
Syringothyris extenuata Hall.
Syringothyris gigas Troost.
Syringothyris texta Hall.
Syringothyris randalli Simpson.
Syringothyris herricki sp. nov.
Syringothyris plena Hall.

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Triisodontidæ.
Carcinodon.
Clænodon.
Ellipsodon.
Epichriacus.
Microclænodon.
Paradoxodon.
Pentacodon.
Protochriacus.
Protozonodon.
Tetraclænodon.

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Cercopis grandiscens.
Stenecphora n. gen.
Stenecphora punctualata.
Dawsonites veter.
Stenolocris n. gen.
Stenolocris venosa.
Ptysmaphora n. gen.
Ptysmaphora flecheri.
Palæoptysoma nov. gen.
Palæoptysma venosa.

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Prodryas Scudder.
Prodryas persephone Scudder.
Jupiteria, gen. nov.
Jupiteria charon, sp. nov.
Lithopsyche, gen. nov.
Lithopsyche styx, sp. nov.
Nymphalites obscurum, sp. nov.
Apanthesis, gen. nov.
Apanthesis leuce, sp. nov.
Prolibythea (Libythea), gen. nov.

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Obolella crassa, Hall, var.
Obolella?
Fordilla (troyensis var. ?)
Lamellibranch ?
Scenella reticulata Bill.
Stenotheca rugosa, var. pauper var. nov.
Stenotheca rugosa, var. abrupta var. nov.
Stenotheca curvirostra var. nov.
Platyceras primævum, Bill.
Pleurotomaria (Raphistoma) attleborensis sp. nov.
Hyolithes quadricostatus sp. nov.
Hyolithes communis var. emmonsi Ford.
Hyolithes americanus Bill.
Hyolithes princeps Bill.
Hyolithes billingsi Walcott?
Hyolithellus micans Bill.
Salterella curvatus sp. nov.
Aristozoë (?).
Microdiscus bellimarginatus sp. nov.
Microdiscus lobatus, Hall.
Paradoxides walcotti, sp. nov.
Ptychoparia mucronatus sp. nov.
Ptychoparia attleborensis sp. nov.

Shell, Inarticulate Brachiopodous. R. P. Whitfield. (Bul. American Mus. Nat. Hist., III, 121, 122. 1890.)

Shells, Marine, Fragments in Till near Boston. W. Upham. (Am. Jour. Sci., (3), XXXVII, 359–372. 1889.)

Shenandoah Valley, Virginia, Mastodon Remains. (American Geologist, VII, 335. 1891.)

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Chonophyllum perfoliatum Goldfuss.
Chonophyllum elongatum Edwards and Haime.
Chonophyllum niagarense Hall.
Chonophyllum magnificum Billings.
Chonophyllum belli Billings.

Sherzer, Will. H.—Continued.

Chonophyllum ellipticum Hall and Whitfield.
Chonophyllum ponderosum Rominger.
Chonophyllum sedaliense White.
Chonophyllum vadum Hall.
Chonophyllum capax Hall.
Chonophyllum pseudohelianathoides sp. nov.
Chonophyllum greenei sp. nov.

The following related genera are described:

Omphyma.
Ptychophyllum.
Cyathophyllum.

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Shimek, B. Loess and its Fossils. (Bul. Lab. Nat. Hist. State Univ. Iowa, Vol. I, pp. 200–214. Iowa City, 1890.) An annotated list of forms found, with notes on the physical conditions indicated by them.

Shimek, B. Loess and its Fossils. (Bul. Lab. Nat. Hist. State Univ. Iowa, Vol. II, pp. 89–98. Iowa City, 1890.) A continuation of the author's paper of similar title in Vol. I, pp. 200–214, of the same publication.

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Age of Point Pleasant, Ohio, Beds. J. F. James. (Proc. Am. As. Adv. Sci., XL, 283–284. 1892.) References made to various species.

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Rhynchonella lævis.
Rhynchonella medialis.
Rhynchonella striata.
Aviculopecten æqualata.
Lyriopecten leiopteroides.
Leptodesma parallelum.
Ptychopteria obsoleta.
Modiomorpha rigidula.
Modiolopsis subrhomboidea.
Goniophora curvata.
Nucula subtrigona.
Nucula sinuosa.
Tellinomya cuneata.
Tellinonomya diminuens.
Platyceras breve.
Platyceras dorsale.
Platyceras inæquale.
Platyceras striatum.
Platyceras mitelliforme.
Platyceras varians.
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Taconic, Lower and Middle of Europe and North America. J. Marcou. (American Geologist, VI, 78-102 and 221-233. 1890.) Incidental references to fossils.

Taconic of Eastern Newfoundland. J. P. Howley. (American Geologist, IV, 121-125. 1889.) Numerous references to fossils.

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yrrell, Joseph B. Foraminifera and Radiolaria from the Cretaceous of Manitoba. (Trans. Roy. Soc. Canada, Vol. VIII, Sec. IV, pp. 111-115. Montreal. 1890.) Notes on the finding of Radiolaria, with a list of species. Reviewed in Neues Jahrbuch, 175, 176, 1892.

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Types of Devonian System in North America. H. S. Williams. (Am. Jour. Sci., (3), XXXV, 51-59. 1888.) Incidental references to fossils from various localities.

Tyrrell, Joseph B. Foraminifera and Radiolaria from the Cretaceous of Manitoba. (Trans. Roy. Soc. Canada, Vol. VIII, Sec. IV, pp. 111-115. Montreal. 1890.) Notes on the finding of Radiolaria, with a list of species. Reviewed in Neues Jahrbuch, 175, 176, 1892.

Udden, J. A. Megalonyx Beds in Kansas. (American Geologist, Vol. vii, pp. 340–345. Minneapolis, 1891.) A description of the occurrence, with a list of forms found.

Ueber die tektonischen Verhältnisse der Republik Mexiko. J. Felix and Hans Lenk. (Zeitsch. der deutsch. geol. Gesell., Band xliv, Heft 2, pp. 303–324. 1892.) Various species mentioned.

Ueber eine Häufigkeit hippuritenartiger Chamiden ausgezeichnete Fauna der oberturonen von Texas, von Ferdinand Roemer. R. T. Hill. (Am. Jour. Sci., (3), xxxvii, 318–319. 1889.)

Uhler, P. H. Additions to Observations on the Cretaceous and Eocene Formations of Maryland. (Trans. Maryland Acad. Sci., Vol. i, pp. 45–72. Baltimore, 1892.) A list of fifty species of Maryland Eocene mollusca is appended.

Uhler, P. H. Albirupean Studies. (Trans. Maryland Acad. Sci., Vol. i, pp. 185–202. Baltimore, 1888.) Incidental references to fossils.

Uhler, P. H. Eocene Tertiary and its Cretaceous Associates in the State of Maryland. (Trans. Maryland Acad. Sci., Vol. i, pp. 11–32. Baltimore, 1888.) Incidental references to fossils.

Uhler, P. H. Notes and Illustrations to Observations on the Cretaceous and Eocene Formations of Maryland. (Trans. Maryland Acad. Sci., Vol. i, pp. 97–104. Baltimore, 1888.)

Uhler, P. H. Study of Gay Head, Martha's Vineyard. (Trans. Maryland Acad. Sci., Vol. i, pp. 204–212. Baltimore, 1888.) Incidental references to fossils.

Uinta Formation, Mammalia. H. F. Osborn and W. B. Scott. (Trans. Am. Philosophical Soc., xvi, 461–572. 1890.)

Ulrich, E. O. American Paleozoic Sponges. (Geol. Sur. Illinois, Vol. viii, pp. 209–241. Springfield, 1890.) The brief incidental remarks are followed by short accounts of the nature of preservation and the general distribution of these forms. The classification is alluded to. The family Anthaspidellidæ is described as new and its various structures figured. A tabular list and classification of the American Paleozoic species are given.

Ulrich, E. O. Beecherella: A new Genus of Lower Helderberg Ostracoda. (American Geologist, Vol. viii, pp. 197–204, 1 plate. Minneapolis, 1891.) The following new forms are figured and described from the Silurian of Albany County, New York:

Beecherella.
Beecherella carinata.
Beecherella subtumida.
Beecherella subtumida, var. intermedia.
Beecherella ovata.
Beecherella cristata.
Beecherella navicula.
Beecherella angularis.

Ulrich, E. O. List of Bryozoans of the Waverly Group in Ohio, with Description of New Species. (Bul. Sci. Lab. Dennison Univ., Vol. iv, pt. i, pp. 62–92, 2 plates. Granville, 1888.) The following species are described:

Fenestella herrickana.
Fenestella meekana.
Fenestella albida, var. richfieldensis.
Fenestella foliata.
Fenestella subflexuosa.
Fenestella cavernosa.
Polypora impressa.
Pinnatopora intermedia.
Pinnatopora simulatrix.
Pinnatopora curvata.
Pinnatopora subangulata.
Pinnatopora minor.
Taeniodictya interpolata.
Cystodictya zigzag.
Cystodictya simulans.
Cystodictya angusta.
Streblotrypa obliqua.
Streblotrypa hertzeri.
Streblotrypa amplexa.
Streblotrypa multiporata.
Streblotrypa striata.
Streblotorypa regularis.
Streblotrypa (?Leioclema) denticulata.
Rhombopora ohioensis.

lrich, E. O. Contributions to Micro-Paleontology of the Cambro-Silurian Rocks of Canada. (Geol. and Nat. Hist. Sur. Canada, Micro-Paleontology, Part II, pp. 27–57, 2 plates. Montreal, 1889.) A study of the Polyozoa and Ostracoda from the Cambro-Silurian Rocks of Manitoba, with descriptions and figures of the following species:

Proboscina auloporoides Nicholson.
Proboscina frondosa Nicholson.
Monticnlipora parastica, var. plana, var. nov.
Monticulipora wetherbyi Ulrich.
Homotrypa sp.?
Diplotrypa westoni sp. nov.
Batostoma manitobense sp. nov.
Petigopora scabiosa sp. nov.
Batostomella gracilis Nicholson.
Bythopora striata sp. nov.
Monotrypella quadrata Rominger.
Fistulipora ? laxata sp. nov.
Strictopora or Rhinidictya sp.?
Dicranopora fragilis Billings.
Dicranopora emacerata Nicholson.
Goniotrypa gen. nov. (provisional.)
Goniotrypa bilateralis sp. nov,
Pachydictya hexagonalis sp. nov.
Pachydictya magnipora sp. nov.
Ptilodictya whiteavesi sp. nov.
Arthroclema angulare Ulrich.
Helopora harrisi James.
Sceptropora facula Ulrich.
Nematopora (?) sp. nov.
Phylloporina trentonensis Nicholson.
Bythocypris cylindrica Hall.
Leperditia subcylindrica sp. nov.
Aparchites minutissimus Hall.
Aparchites unicornis Ulrich.
Primitia lativia sp. nov.
Primitia (?) (Beyrichia) parallela sp. nov.
Eurychilina gen. nov.
Eurychilina reticulata sp. nov.
Eurychilina manitobensis sp. nov.
Strepula quadrilirata Hall & Whitfield.
Strepula lunatifera sp. nov.

Reviewed in Am. Geologist, 5, 107, 1890; also Ottawa Naturalist, III, No. 3, 1889; and Neues Jahrbuch, 334, 1890.

lrich, E. O. Correlation of the Lower Silurian Horizons of Tennessee and the Ohio and Mississippi Valleys with those of New York and Canada. (American Geologist, Vol. I, pp. 100–110, 179–190, and 305–315. Minneapolis, 1888.) Numerous references to fossils.

lrich, E. O. Correlation of Lower Silurian Horizons of Tennessee and of the Ohio and Mississippi Valleys with those of New York and Canada. (American Geologist, Vol. II, pp. 39–44. Minneapolis, 1888.) A continuation of the author's papers in American Geologist, Vol. I.

lrich, E. O. Lingulasma: A New Genus and Eight New Species of Lingula and Trematis. (American Geologist, Vol. III, pp. 377–391. Minneapolis, 1889.) The following described as new:

Lingula procteri.
Lingula bisulcata.
Lingula whitfieldi.
Lingula modesta.
Lingulasma.
Lingulasma schucherti.

lrich, E. O. Lingulasma: New Genus and Eight New Species of Lingula and Trematis. (American Geologist, Vol. IV, pp. 21–25. Minneapolis, 1889.) The following described as new:

Trematis fragilis.
Trematis crassipuncta.
Trematis umbonata.
Trematis oblata.

lrich, E. O. New and Little Known American Paleozoic Ostracoda. (Jour. Cincinnati Soc. Nat. Hist., Vol. XIII, pp. 104–137 and 173–211, plates 7–18. Cincinnati, 1890–1891.) The new species are:

Entomis madisonensis.
Pontocypris (?) illinoisensis.
Ctenobolbina.
Ctenobolbina ciliata Emmons.
Ctenobolbina ciliata, var. curta.
Ctenobolbina ciliata, var. emaciata.
Ctenobolbina alata.
Ctenobolbina bispinosa.

Ulrich, E. O.—Continued.

Ctenobolbina tumida.
Tetradella.
Tetradella quadrilirata Hall and Whitfield.
Tetradella oculifera Hall.
Tetradella subquadrans.
Bollia persulcata Ulrich.
Bollia pumila.
Depranella.
Depranella crassinoda.
Depranella nitida.
Depranella macer.
Depranella ampla.
Depranella elongata.
Jonesella.
Jonesella crepidiformis Ulrich.
Jonesella pedigera.
Jonesella digitata.
Jonesella crassa.
Placentula marginata.
Placentula inornata.
Beyrichia (Primitia?) parallela Ulrich.
Eurychilina subradiata.
Eurychilina longula.
Eurychilina granosa.
Eurychilina æqualis.
Eurychilina obesa.
Eurychilina striatomarginata Miller.
Primitia centralis.
Primitia perminima.
Primitia impressa.
Primitia cincinnatiensis Miller.
Primitia medialis.
Primitia milleri.
Primitia glabra.
Primitia nodosa.
Primitia nitida.
Primitia rudis.
Primitia (?) sculptilis.
Aparchites oblongus.
Leperditia flabulites Conrad.
Leperditia linneyi.
Leperditia tumidula.
Leperditia appressa.
Isochilina subnodosa.
Isochilina saffordi.
Isochilina ampla.
Isochilina kentuckyense.
Isochilina amiana.
Isochilina amiana, var. insignis.

Reviewed in Neues Jahrbuch, 257-259, 1892.

Ulrich, E. O. New Lamellibranchiata. (American Geologist, Vol. v, pp. 270-275. Minneapolis, 1890.) The following species described and figured as new from the Silurian:

Modiolopsis oblonga.
Modiolopsis subparallela.
Modiolopsis milleri.
Modiolopsis oviformis.
Modiolopsis simulatrix.
Modiolopsis pulchella.
Modiolopsis subtruncata.
Modiolopsis alata.
Modiolopsis parva.
Modiolopsis angustata.

Ulrich, E. O. New Lamellibranchiata. (American Geologist, Vol. vi, pp. 173-181 and 383-389. Minneapolis, 1890.) The following genera and species described and figured as new from the Silurian:

Ischyrodonta.
Ischyrodonta truncata.
Ischyrodonta elongata.
Whitella.
Whitella obliquata.
Whitella umbonata.
Whitella compressa.
Whitella schofieldi Ulrich
Whitella truncata.
Whitella subornata.
Cypricardites grandis.

Ulrich, E. O. New Lamellibranchiata. (American Geologist, Vol. x, pp. 96-104. Minneapolis, 1892.) One genus and eight species described and figured as new:

Cleionychia.
Cleionychia rhomboidea.
Cypricardites terminalis.
Cypricardites oviformis.
Cypricardites ? modestus.
Technophorus subacutus.
Technophorus divaricatus.
Technophorus filistriatus.
Tellinomya longa.

Ulrich, E. O. New Lower Silurian Lamellibranchiata, Chiefly from Minnesota Rocks. (Geol. and Nat. Hist. Sur. Minnesota, Nineteenth Ann. Rep., for 1890, pp. 211–248. Minneapolis, 1892.) The following species described with figures as new:

Tellinomya nitida sp. nov.
Tellinomya compressa sp. nov.
Tellinomya planodorsata sp. nov.
Tellinomya intermedia sp. nov.
Tellinomya subrotunda sp. nov.
Tellinomya similis sp. nov.
Tellinomya recurva sp. nov.
Technophorus(?) extenuatus sp. nov.
Cleidophorus consuetus sp. nov.
Modiolopsis plana Hall.
Modiolopsis similis sp. nov.
Modiolopsis subelliptica sp. nov
Modiolopsis concava sp. nov.
Orthodesma minnesotense sp. nov.
Orthodesma saffordi sp. nov.
Cypricardites sardesoni sp. nov.
Cypricardites obtusifrons sp. nov.
Cypricardites glabellus sp. nov.
Cypricardites cingulata sp. nov.
Cypricardites germanus sp. nov.
Cypricardites tenellus sp. nov.
Cypricardites nanus sp. nov.
Cypricardites haynianus (?) Safford.
Matheria rugosa sp. nov.
Ischyrodonta ovalis sp. nov.
Plethocardia gen. nov.
Plethocardia umbonata, sp. nov.
Plethocardia suberecta sp. nov.
Whitella præcipta Ulrich.
Whitella concentrica sp. nov.
Cuneamya sulcodorsata sp. nov.

Reviewed in Am. Jour. Sci., (3), XLIV, 179, 1892.

Ulrich, E. O. New Lower Silurian Ostracoda, No. 1. (American Geologist, Vol. X, pp. 263–270, 1 plate. Minneapolis, 1892.) The following genera and species described and figured as new:

Leperditia tumida.
Leperditia mundula,
Leperditia æquilatera.
Leperditia inflata.
Leperditia germana.
Leperditia sulcata, var. ventricornis.
Leperditia (Primitia) dorsicornis.
Leperditia granilabiata.
Leperditia millepunctata.
Leperditia fimbriata.
Schmidtella.
Schmidtella crassimarginata.

Ulrich, E. O. Nomenclature of Cincinnati Group Fossils. (American Geologist, Vol. I, pp. 333–335. Minneapolis, 1888.) A short note on the nomenclature of certain species.

Ulrich, E. O. Paleozoic Bryozoa. (Geol. Sur. Illinois, Vol. VIII, pp. 283–688. Springfield, 1890.) The memoir is preceded by an explanation of the terms used. Chapter I is a description of the general and comparative structure of the Paleozoic Bryozoa. Chapter II is on the classification and interrelations of families and genera. The original Gymnolæmata is made to include all the fossil bryozoa. They are arranged under three suborders; Cyclostomata, Trepostomata, and Cryptostomata, which are new groups and are referred to Ctenostomata and Cheilostomata. The first of these suborders contain one family, Ascodictyonidæ. The second contains several groups, while the third is arranged in nine families, which are fully described. A synopsis of the classification is given in which the families and genera are defined. They are as follows:

Ascodictyonidæ.
Ascodictyon.
Rhopalonaria.
Tubuliporidæ.
Stomatopora.
Proboscina.
Berenicea.
Frondiporidæ.
Scenellopora.
Phaceloporidæ fam. nov.
Phacelopora gen. nov.
Entalophoridæ.
Diploclema gen. nov.
Mitoclema.

Ulrich, E. O.—Continued.
Protocrisina gen. nov.
Monticuliporidæ.
Monticulipora.
Atactoporella.
Homotrypella.
Peronopora.
Homotrypa.
Prasopora.
Heterotrypidæ fam. nov.
Heterotrypa.
Dekayia.
Petigopora.
Dekayella.
Calloporidæ fam. nov.
Callopora.
Aspidopora.
Calloporella.
Thematoporidæ fam. nov.
Trematopora.
Nicholsonella gen. nov.
Constellaria.
Stellipora.
Idiotrypa.
Batostomellidæ fam. nov.
Batostomella.
Stenopora.
Anisotrypa.
Bythopora.
Callotrypa.
Leioclema.
Amplexoporidæ fam. nov.
Amplexopora.
Monotrypella.
Petalotrypa.
Atactopora.
Leptotrypa.
Discotrypa.
Diplotrypidæ fam. nov.
Diplotrypa.
Batostoma.
Monotrypa.
Ceramoporidæ.
Ceramopora.
Ceramoporella.
Crepipora.
Diamesopora.
Chiloporella.
Anolotichia gen. nov.
Spatiopora.
Fistuliporidæ.
Fistulipora.
Eridopora,
Chilotrypa.
Meekopora.
Strotopora.
Lichenotrypa.
Buskopora.
Selenopora.
Botryllopora.
Pinacotrypa gen. nov.
Cystodictynidæ.
Cystodictya.
Coscinium.
Dichotrypa gen. nov.
Actinotrypa gen. nov.
Tæniopora.
Prismopora.
Scalaripora.
Evactinopora.
Glyptopora.
Rhinoporidæ fam. nov.
Rhinopora.
Stictoporidæ.
Stictopora.
Eurydictya gen. nov.
Dicranopora.
Goniotrypa.
Eupilopora gen. nov.
Pachydictya.
Phyllodictya.
Ptilodictyonidæ.
Ptilodictya.
Clathropora.
Phænopora.
Graptodictya.
Arthropora.
Tæniodictya gen. nov.
Ptilotrypa gen. nov.
Stictotrypa gen. nov.
Stictoporella.
Intrapora.
Fenestellidæ.
Fenestella.
Semicoscinium.
Fenestrapora.
Isotrypa.
Unitrypa.
Hemitrypa.
Helicopora.
Archimedes.
Lyropora.
Fenestralia.
Polypora.
Thamniscus.
Phyllopora.
Acanthocladiidæ.
Pinnatopora.
Septopora.

rich, E. O.—Continued.

Acanthocladia.
Synocladia.
Diplopora.
Ptilopora.
Spragioporidæ fam. nov.
Sphragiopora gen. nov.
Phylloporinidæ fam. nov.
Phylloporina gen. nov.
Chainodictyon.
Drymotrypa gen. nov.
Arthrostylidæ.
Arthrostylus gen. nov.
Arthroclema.
Sceptropora gen. nov.
Helopora.
Nematopora gen. nov.
Rhabdomesontidæ.
Rhombopora.
Rhabdomeson.
Cœloconus gen. nov.
Bactropora.
Streblotrypidæ.
Streblotrypa.
Worthenopora gen. nov.
Cyclopora.
Proutella gen. nov.
Cycloporella gen. nov.
Heliotrypa.

The following species are described, most of them as new:

Protocrisina exigua.
Phacelopora pertenuis.
Phacelopora constricta.
Monticulipora lamellosa.
Monticulipora winchelli.
Homotrypa arbuscula.
Homotrypa gelasinosa.
Homotrypa flabellaris.
Homotrypella contexta.
Heterotrypa prolifica.
Heterotrypa inflecta.
Heterotrypa singularis.
Dekayia devonica.
Callopora subnodosa.
Calloporella ? nodulosa.
Trematopora debilis.
Trematopora nitida.
Trematopora calloporoides.
Nicholsonella ponderosa.
Nicholsonella cumulata.
Constellaria parva.
Leioclema wilmingtonense.
Leioclema occidens, Hall and Whitfield.
Leioclema minutum, Rominger.
Leioclema wachsmuthi.
Leioclema subglobosum.
Leioclema gracillium.
Leioclema puntatum Hall.
Leioclema ? foliatum.
Leioclema ? araneum.
Batostomella simulatrix.
Batostomella obliqua.
Batostomella interstincta.
Batostomella spinulosa.
Batostomella abrupta.
Batostomella nitidula.
Stenopora americana.
Stenopora americana, var. varsovensis.
Stenopora montifera.
Stenopora emaciata.
Stenopora intercalaris.
Stenopora angularis.
Stenopora intermittens.
Stenopora tuberculata Prout.
Stenopora cestriensis.
Stenopora ramosa.
Stenopora meekana.
Stenopora rudis.
Stenopora carbonaria Worthen.
Stenopora carbonaria, var. maculosa.
Stenopora carbonaria, var. conferta.
Stenopora ? signata.
Anisotrypa fistulosa.
Anisotrypa ramulosa.
Anisotrypa solida.
Amplexopora affinis.
Amplexopora pustulosa.
Monotrypella crassimuralis.
Monotrypella appressa.
Petalotrypa compressa.
Petalotrypa delicata.
Leptotrypa hexagonalis.
Leptotrypa filiosa D'Orbigny.
Leptotrypa stidhami.
Leptotrypa semipilaris.
Diplotrypa patella.
Diplotrypa ? dubia.
Batostoma variabile.
Batostoma imperfectum.
Monotrypa rectimuralis.
Ceramopora imbricata Hall.
Ceramoporella distincta.
Ceramoporella stellata.
Ceramoporella granulosa.
Ceramoporella ? ohioensis, Nicholson.
Diamesopora vaupeli.
Diamesopora communis.
Crepipora simulans.

Ulrich, E. O.—Continued.

Crepipora epidermata.
Crepipora impressa.
Crepipora solida.
Crepipora hemisphærica.
Anolotichia ponderosa.
Fistulipora communis.
Fistulipora monticulata.
Fistulipora astrica.
Fistulipora collina.
Fistulipora foordi.
Fistulipora spinulifera Rominger.
Fistulipora (? Dichotrypa) corrugata.
Fistulipora stellifera Rominger.
Meekopora eximia.
Meekopora approximata.
Meekopora clausa.
Meekopora ? aperta.
Strotopora perminuta.
Strotopora foveolata.
Strotopora dermata.
Buskopora lunata Rominger.
Botryllopora socialis Nicholson.
Cystodictya hamiltonensis.
Cystodictya nitida.
Cystodictya americana.
Cystodictya pustulosa.
Cystodictya lineata, var. major.
Coscinium latum.
Dichotrypa grandis.
Dichotrypa foliata.
Dichotrypa elegans.
Dichotrypa intermedia.
Dichotrypa flabellum Rominger.
Dichotrypa lyroides.
Actinotrypa pecularis Rominger.
Tæniopora occidentalis.
Prismopora trifolia Rominger.
Prismopora minima.
Scalaripora separata.
Scalaripora approximata.
Evactinopora radiata Meek & Worthen.
Evactinopora sexradiata Meek & Worthen.
Evactinopora quinqueradiata.
Evactinopora grandis Meek & Worthen.
Glyptopora plumosa Prout.
Glyptopora sagenella Prout.
Glyptopora sagenella, var. caliculosa.
Glyptopora sagenella, var. lata.
Glyptopora michelinia Prout.
Glyptopora pinnata.
Glyptopora keyserlingi Prout.
Glyptopora elegans Prout.
Glyptopora megastoma.
Glyptopora punctipora.
Eudrydictya calhounensis.
Eurydictya montifera.
Eurydictya sterlingensis.
Pachydictya everetti.
Pachydictya splendens.
Pachydictya gigantea.
Pachydictya firma.
Pachydictya fenestelliformis Nicholson.
Euspilopora serrata.
Euspilopora ? barrisi.
Tæniodictya ramulosa.
Tæniodictya ramulosa, var. burlingtonensis.
Tæniodictya frondosa.
Tæniodictya cingulata.
Tæniodictya subrecta.
Ptilotrypa obliquata.
Intrapora cosciniformis Nicholson.
Stictoperella basalis.
Stictoporella ? undulata.
Fenestella vera.
Fenestella filistriata.
Fenestella burlingtonensis.
Fenestella rudis.
Fenestella limitaris.
Fenestella regalis.
Fenestella compressa.
Fenestella compressa, var. nodolorsalis.
Fenestella multispinosa.
Fenestella triserialis.
Fenestella funicula.
Fenestella cingulata.
Fenestella serratula.
Fenestella exigua.
Fenestella tenax.
Fenestella cestriensis.
Fenestella flexuosa.
Fenestella elevatatipora.
Fenestella delicatula.
Fenestella modesta.
Fenestella perminuta.
Fenestella wortheni.
Fenestella sevillensis.
Fenestella mimica.
Fenestella conradi.
Fenestellai næqualis.
Semicoscinium planodorsatum.
Semicoscinium rhombicum.

Ulrich, E. O.—Continued.

Fenestrapora occidentalis.
Hemitrypa tenera.
Hemitrypa proutana.
Hemitrypa proutana, var. vermifera.
Hemitrypa proutana, var. nodulosa.
Hemitrypa nodosa.
Hemitrypa aspera.
Hemitrypa perstriata.
Hemitrypa pateriformis.
Archimedes negligens.
Archimedes grandis.
Archimedes owenanus Hall.
Archimedes wortheni Hall.
Archimedes perminimus.
Archimedes compactus.
Archimedes communis.
Archimedes intermedius.
Archimedes swallovanus Hall.
Archimedes terebriformis.
Archimedes invaginatus.
Archimedes proutanus.
Archimedes meekanus Hall.
Archimedes distans.
Archimedes sublaxus.
Archimedes laxus Hall.
Lyropora ranosculum.
Lyropora subquadrans Hall.
Lyropora quincuncialis Hall.
Lyropora divergens.
Lyropora ovalis.
Polypora shumardi Prout.
Polypora burlingtonensis.
Polypora halliana Prout.
Polypora maccoyana.
Polypora (?) gracilis Prout.
Polypora simulatrix.
Polypora retrorsa.
Polypora radialis.
Polypora biseriata.
Polypora varsoviensis Prout.
Polypora spininodata.
Polypora cestriensis.
Polypora tuberculata Prout.
Polypora corticosa.
Polypora complanata.
Polypora spinulifera.
Polypora approximata.
Polypora whitei.
Polypora whitei, var. inculpata.
Polypora nodcarinata.
Polypora submarginata.
Polypora distincata.
Polypora crassa.
Fenestralia sancti-ludovici Prout.
Fenestralia sancti-ludovici, var. compacta.
Thamniscus divaricans.
Thamniscus sculptilis.
Thamniscus furcillatus.
Thamniscus ramulosus.
Thamniscus ramulosus, var. sevillensis.
Thamniscus octonarius.
Phyllopora aspera.
Phyllopora superba.
Pinnatopora youngi.
Pinnatopora vinei.
Pinnatopora flexuosa.
Pinnatopora striata.
Pinnatopora conferta.
Pinnatopora tenuiramosa.
Pinnatopora bellula.
Pinnatopora trilineata Meek.
Ptilopora acuta.
Ptilopora valida.
Ptilopora cylindracea.
Ptilopora paupera.
Ptilopora prouti Hall.
Septopora cestriensis Prout.
Septopora subquadrans.
Septopora decipiens.
Septopora biserialis, Swallow.
Septopora biserialis, var. nervata.
Septopora pinnata.
Septopora robusta.
Septopora robusta, var. intermedia.
Septopora delicatula.
Acanthocladia fruticosa.
Diplopora bifurcata.
Diplopora biserialis.
Sphragiopora parasitica.
Phylloporina granistriata.
Chainodictyon laxum, var. minor.
Arthroclema angulare.
Helopora imbricata.
Nematopora retrosa.
Nematopora alternata.
Nematopora fragilis.
Nematopora delicatula.
Rhombopora subannulata.
Rhombopora sulcifera.
Rhombopora lineinodis.
Rhombopora dichotoma.
Rhobompora gracilis.
Rhombopora exigua.
Rhombopora angustata.
Rhombopora incrassata.
Rhombopora varians.
Rhombopora transversalis.

Ulrich, E. O.—Continued.

Rhombopora attenuata.
Rhombopora? asperula.
Rhombopora? aspiralis.
Rhombopora simulatrix.
Rhombopora decipiens.
Rhombopora tabulata.
Rhombopora persimilis.
Rhombopora minor.
Rhombopora tenuirama.
Rhombopora nickelsi.
Acanthoclema confluens.
Bactropora simplex.
Cœloconus rhombicus.
Cœloconus granosus.
Streblotrypa major.
Streblotrypa radialis.
Streblotrypa nickelsi.
Streblotrypa subspinosa.
Streblotrypa distincta.
Worthenopora spinosa.
Proutella discoidea Prout.
Worthenopora spatulata Prout.
Cyclopora expatiata.
Cyclopora fungia Prout.
Cycloporella spinifera.
Cycloporella? perversa.

Ulrich, E. O. Preliminary Description of New Lower Silurian Sponges. (American Geologist, Vol. III, pp. 233–248. 1889.) The following described as new:

Rauffella.
Rauffella filosa.
Rauffella palmipes.
Leptopterion mammiferum.
Heterospongia.
Heterospongia subramosa.
Heterospongia knotti.
Heterospongia aspera.
Saccospongia.
Saccospongia rudis.
Saccospongia danvillensis.
Dystacospongia minima.
Streptospongia labyrinthica.
Hindia parva.
Cylindrocœlia.
Cylindrocœlia endoceroidea.
Cylindrocœlia covingtonensis.
Cylindrocœlia minnesotensis.
Cylindrocœlia minor.

Ulrich, E. O. Sceptropora: A New Genus of Bryozoa, with Remarks on Helopora (Hall), and other Genera of that Type. (American Geologist, Vol. I, pp. 228–234. Minneapolis, 1888.) The following described and figured as new from the Silurian of Minnesota:

Sceptropora.
Sceptropora facula.

Ulrich, E. O. Sponges of the Devonian and Carboniferous Systems. (Geol. Sur. Illinois, Vol. VIII, pp. 243–251. Springfield, 1890.) The following genera and species are described as new:

Hystriospongia carbonaria.
Batospongia spicata.
Belemnospongia.
Belemnospongia fasicularis.
Lasiocladia hindei.
Syringophyllum.
Syringophyllum wortheni.

Ulrich, E. O. Two New Silurian Species of Lichas. (American Geologist, Vol. X, pp. 271–272. Minneapolis, 1892.) The following species described and figured as new from the Silurian of Minnesota:

Lichas (Hopolichas) robbinsi.
Lichas (Hopolichas) bicornis.

Ulrich, E. O., and Oliver Everett. Lower Silurian Sponges. (Geol. Sur. Illinois, Vol. VIII, pp. 255–282. Springfield, 1890.) The following species and genera are described and figured as new:

Anthaspidella.
Anthaspidella mammulata.
Anthaspidella florifera.
Anthaspidella parvistellata.
Anthaspidella scutula.
Anthaspidella grandis.
Anthaspidella firma.
Anthaspidella fenestrata.
Anthaspidella obliqua.
Anthaspidella ? magnifica.
Zittelella.
Zittelella typicalis.
Zittelella typicalis, var. pistilliformis.
Zittelella typicalis, var. turbinata.
Zittelella typicalis, var. subrotunda.
Zittelella lobata.
Zittelella inosculata.
Edriospongia.
Edriospongia basalis.
Streptosolen.

Ulrich, E. O.—Continued.

Streptosolen obconicus.
Calathium ?? (? Zittelella) infelix.
Hindia inæqualis.
Strotospongia.
Strotospongia maculosa.
Dystactospongia minor.
Dystactospongia rudis.
Camarocladia.
Camarocladia dichotoma.
Actinostroma ? trentonense.

Upham, Warren. Marine Shells and Fragments of Shells in the Till near Boston. (Am. Jour. Sci., (3), Vol. XXXVII, pp. 359–372. New Haven, 1889.) Incidental references to Pleistocene forms. Reviewed in Am. Geologist, III, 399, 1889.

Upham, Warren. Recent Fossils near Boston. (Am. Jour. Sci., (3), Vol. XLIII, pp. 201–209. New Haven, 1892.) Notes on the distribution of various Pleistocene forms.

Upper Silurian Strata near Penobscot Bay, Maine. W. W. Dodge and C. E. Beecher. (Am. Jour. Sci., (3), XLIII, 412–418. 1892.)

Utah.

Agnostus, North American Species. A. W. Vogdes. (American Geologist, IX, 377–396. 1892.)

Laramie Group. J. S. Newberry. (Bul. Geol. Soc. America, I, 524–527. 1890.) Abstract.

Revision of the Cretaceous Echinoidea of North America. W. B. Clark. (Johns Hopkins Univ. Circulars, No. 87, 75–77. 1891.)

Trilobites, Genera and Species of North American Carboniferous. A. W. Vogdes. (Ann. N. Y. Acad. Sci., IV, 69–105. 1888.)

Utica Formation at Point-a-Pic, Murry River, Fossils. H. M. Ami. (Canadian Rec. Sci., III, 101–106. 1888.)

Utica Fossils from Rideau, Ottawa, Ont. H. M. Ami. (Trans. Ottawa Field Naturalists' Club, II, No. 12, 165–169. 1888.)

Validity of Three Species of Cephalopods described by Schlüter in the Niederrhein Gesellschaft at Bonn, March, 1887. R. T. Hill. (American Naturalist, XXIII, 169. 1889.) Criticism.

Value in Classification of Stages of Growth and Decline, with Propositions for a new Nomenclature. A. Hyatt. (American Naturalist, XXII, 872–884. 1888.)

Value of Term "Hudson River Group" in Geologic Nomenclature. C. D. Walcott. (Bul. Geol. Soc. America, I, 335–356. 1890.) Incidental references to fossils.

Variability of Specific Characters as Exhibited by the Extinct Genus Coryphodon. C. Earle. (Science, XX, 7–9. 1892.)

Variation Exhibited by a Carbonic Gasteropod. C. R. Keyes. (American Geologist, III, 330–334. 1889.)

Variation; with Special Reference to Certain Paleozoic Genera. J. F. James. (American Naturalist, XXIII, 1071–1089. 1889.)

Vermont.

Calciferous Formation in Champlain Valley. E. Brainard and H. M. Seely. (Bul. Geol. Soc. America, I, 501–516. 1890.) Incidental references to fossils.

Calciferous Formation in Champlain Valley. E. Brainard and H. M. Seely. (Bul. Am. Mus. Nat. Hist., III, 1–23. 1890.) Various species mentioned.

Fauna of Lower Cambrian or Olenellus Zone. C. D. Walcott. (U. S. Geol. Sur., Tenth Ann. Rep., 511–658. 1890.)

Fauna of Rocks at Fort Cassin, Vermont, with Descriptions of New Species. R. P. Whitfield. (Bul. Am. Mus. Nat. Hist., III, 26–39. 1890.)

Fossils in Lower Taconic of Emmons. C. D. Walcott. (Proc. Am. As. Adv. Sci., XXXVI, 212–213. 1888.) Abstract.

Original Chazy Rocks. E. Brainard and H. M. Seely. (American Geologist, II, 323–330. 1888.) Mention made of different species.

Taconic of Emmons, Fossils. C. D. Walcott. (Proc. Am. As. Adv. Sci., XXXVI, 212–213. 1888.) Abstract.

Vermont—Continued.

Taconic System of Emmons and Use of Name Taconic in Geologic Nomenclature. C. D. Walcott. (Am. Jour. Sci., (3), xxxv, 229-242. 1888.) Incidental references to fossils.

Vertebrates.

Age of Staked Plains of Texas. E. D. Cope. (American Naturalist, xxvi, 49. 1892.)

Anatomy of Hesperornis. F. A. Lucas. (Proc. Biol. Soc. Wash., vi, March. 1891.)

Ancestry of Chalicotherium. H. F. Osborn. (Science, xix, 276. 1892.)

Artesian Wells at Atlantic City, N. J. W. Lewis. (Proc. Acad. Nat. Sci., Phila., xxxix, 339-342. 1888.) Various species mentioned.

Artiodactyla. E. D. Cope. (American Naturalist, xxii, 1079-1095. 1888.) General account of the order.

Avifauna, Fossil, of Silver Lake Region of Oregon. R. W. Shufeldt. (Proc. Am. As. Adv. Sci., xl, 286. 1892.) Abstract.

Bear, California Cave. E. D. Cope. (American Naturalist, xxv, 997-999. 1891.)

Bear River Formation, Stratigraphical Position. T. W. Stanton. (Am. Jour. Sci., (3), xliii, 98-115. 1892.)

Beiträge zur Kenntniss der Gattung Protosphyræna Leidy. J. Felix. (Zeitsch. der deutsch. geol. Gesell., Band xlii, Heft 2, 278-303. 1890.)

Bibliography of North American Vertebrate Paleontology for the Year 1889. J. Eyerman. (American Geologist, v, 250-253. 1890.)

Bibliography of North American Vertebrate Paleontology for year 1891. J. Eyerman. (American Geologist, ix, 249-256. 1892.)

Birds from Equus Beds of Oregon. R. W. Shufeldt. (American Naturalist, xxv, 359-362. 1891.)

Birds from Equus Beds of Oregon. R. W. Shufeldt. (American Naturalist, xxv, 818-821. 1891.)

Bones of Megalonyx not before Known. J. M. Safford. (Proc. Am. As. Adv. Sci., xl, 289. 1892.) Abstract.

Calciferous Sandrock of Lake Champlain, Imperfectly Known Fossils, and Descriptions of Several New Forms. R. P. Whitfield. (Bul. Am. Mus. Nat. Hist., ii, 42-63. 1889.)

Carcharodon Mortoni, Gibbs. F. A. Lucas. (Proc. Biol. Soc. Washington, vii, 151-152. 1892.)

Carettochelys, Ramsey, Relations. G. Baur. (American Naturalist, xxvi, 631-639. 1892.)

Casteroides, Recent Find. J. Moore. (American Naturalist, xxiv, 767, 768. 1890.)

Ceratopsidæ (or Horned Dinosaurs) of North America. O. C. Marsh. (Brit. As. Adv. Sci., 793-795. 1890.)

Cetacea. E. D. Cope. (American Naturalist, xxiv, 599-616. 1890.) General account of the order.

Chalicotherioidea, is Meniscotherium a Member? H. F. Osborn. (American Naturalist, xxvi, 506-509. 1892.)

Characters of Protoceras (Marsh) the New Artiodactyle from the Lower Miocene. H. F. Osborn and J. L. Wortman. (Bul. Am. Mus. Nat. Hist., iv, 351-371. 1892.)

Classification of Testudinata. G. Baur. (American Naturalist, xxiv, 530-536. 1890.) Allusions to species of fossils.

Coal Measures of Central Iowa, Fauna. C. R. Keyes. (Proc. Acad. Nat. Sci., Phila., 222-247. 1888.)

Collection of Fossil Birds from Equus Beds of Oregon. R. W. Shufeldt. (Proc. Biol. Soc. Washington, vi, March. 1891.)

Vertebrates—Continued.

Comparison of Principal Forms of the Dinosauria of Europe and America. O. C. Marsh. (Am. Jour. Sci., (3), xxxvii, 323–331. 1889.)

Contribution to Knowledge of Fauna of Blanco Beds of Texas. E. D. Cope. (Proc. Acad. Nat. Sci., Phila., xliv, 226–230. 1892.)

Contribution to Vertebrate Paleontology of Texas. E. D. Cope. (Proc. Am. Philos. Soc., xxx, 123–131. 1892.)

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Fossils in "Archæan" Rocks of Central Piedmont, Virginia. N. H. Darton. (Am. Jour. Sci., (3), xliv, 50-52. 1892.)

Lafayette Formation in Virginia, Fossils. N. H. Darton. (American Geologist, ix, 161-183. 1892.)

Mastodon Remains in the Shenandoah Valley, Virginia. (American Geologist, vii, 335. 1891.)

Paleontology of New York. J. Hall and J. M. Clarke. (Nat. Hist. New York, Pal., vii, 236 pp. 1888.)

Sauropoda and Other New Dinosaurs from Potomac Formation. O. C. Marsh. (Am. Jour. Sci., (3), xxxv, 89-94. 1888.) Several forms described as new.

Stratigraphy of Portion of Central Appalachian Virginia. N. H. Darton. (American Geologist, x, 10-18. 1892.) Incidental references to fossils.

Tertiary Fauna of Florida. W. H. Dall. (Trans. Wagner Free Inst. Sci., Phila., iii, 1-178. 1890.)

Virginia, Fossils in Lafayette Formation. N. H. Darton. (American Geologist, ix, 181-183. 1892.)

Visual Area in Trilobite, Phacops Rana, Green, Structure and Development. J. M. Clarke. (Journal Morphology, ii, 253-270. 1888.)

ogdes, A. W. American Species of Genus Agnostus. (American Geologist, Vol. ix, pp. 377–396, 2 plates. Minneapolis, 1892.) Contains a historical sketch with a description of the genus, and figures and descriptions of the following species:

Agnostus desideratus Walcott.
Agnostus canadensis Billings.
Agnostus communis Hall and White.
Agnostus coloradensis Shumard.
Agnostus orion Billings.
Agnostus josepha Hall.
Agnostus richmondensis Walcott.
Agnostus maladensis Meek.
Agnostus bidens Meek.
Agnostus tumidosus Hall and Whitefield.
Agnostus interstrictus White.
Agnostus acutilobus Matthew.
Agnostus obtusilobus Matthew.
Agnostus tessella Matthew.
Agnostus acadicus Hartt.
Agnostus acadicus, var. declives Matthew.
Agnostus regulus Matthew.
Agnostus umbo Matthew.
Agnostus vir Matthew.
Agnostus vir, var. concinnus Matthew.
Agnostus americanus Billings.
Agnostus disparilis Hall.
Agnostus parilis Hall.
Agnostus prolongus Hall & Whitfield.
Agnostus seclusus Walcott.
Agnostus galba Billings.
Agnostus fabius Billings.

ogdes, A. W. Bibliography of Paleozoic Crustacea from 1688 to 1889. (Bul. U. S. Geol. Sur., No. 63, 177 pp. Washington, 1890.) A complete authors' list. Reviewed in Am. Jour. Sci., (3), xli, 436–437, 1891; Am. Geologist, vii, 379–381, 1891.

ogdes, A. W. Catalogue of North American Paleozoic Crustacea confined to Non-Trilobitic Genera and Species. (Ann. N. Y. Acad. Sci., Vol. v, No. i, 2 plates. New York, 1889.) Description of species; with Stringocaris gen. nov. Reviewed in Neues Jahrbuch, 153, 154, 1891.

ogdes, A. W. Description of two New Species of Carboniferous Trilobites. (Trans. New York Acad. Sci., Vol. vii, pp. 248–250. New York, 1888.) *Phillipsia sampsoni* and *Griffithides sedaliensis* are described as new from the Lower Carboniferous of Missouri.

ogdes, A. W. Genera and Species of North American Carboniferous Trilobites. (Ann. N. Y. Acad. Sci., Vol. iv, pp. 69–105, 2 plates. New York, 1888.) The following species described:

Proetus loganensis.
Proetus peroccidens H. & W.
Proetus tennesseensis.
Proetus trinucleatus.
Proetus ellipticus M. & W.
Phillipsia perannulata Shum.
Phillipsia cliftonensis Shum.
Phillipsia major Shum.
Phillipsia insignis Meek.
Phillipsia stevensoni Meek.
Phillipsia doris Hall.
Phillipsia rockfordensis Winch.
Phillipsia howi Bill.
Phillipsia tuberculata M. & W.
Griffithides portlockii M. & W.
Griffithides bufo M. & W.
Griffithides scitula M. & W.
Griffithides sangamonensis M. & W.
Griffithides granulatus M & W.
Brachymetopus lodiensis Meek.

Reviewed in Am. Jour. Sci., (3), xxxv, 500, 1888.

gdes, A. W. Sedalia Trilobites. (Trans. St. Louis Acad. Sci., Vol. v, pp. 615–618. St. Louis, 1892.) One new species, *Brachymetopus armatus*, figured and described and affinities pointed out.

gdes, A. W., J. M. Safford and. New Species of Fossil Crustacea from Lower Silurian of Tennessee, with Remarks on Others not as well Known. (Proc. Acad. Nat. Sci., Phila., xli, 166–168. Phila., 1889.) Description of many species. Reviewed in Neues Jahrbuch, 440, 1890.

Wachsmuth, Charles, and Frank Springer. Crotalocrinus; Its Structure and Zoological Position. (Proc. Acad. Nat. Sci., Phila., Vol. XL, pp. 364–390, 2 plates. Philadelphia, 1888.) Reviewed in Am. Geologist, III, 201, 1889.

Wachsmuth, Charles, and Frank Springer. Description of Two New Genera and Eight New Species of Camerate Crinoids from the Niagara Group. (American Geologist, Vol. X, pp. 135–144. Minneapolis, 1892.) The following described as new from the Silurian:

Idiocrinus.
Idiocrinus elongatus.
Idiocrinus ventricosus.
Hyptiocrinus.
Hyptiocrinus typus.
Eucalyptocrinus lindahli.
Callicrinus beachleri.
Melocrinus roemeri.
Melocrinus oblongus.
Melocrinus parvus.

Wachsmuth, Charles, and Frank Springer. Discovery of the Ventral Structure of Taxocrinus and Haplocrinus; and Consequent Modifications in the Classification of the Crinoidea. (Proc. Acad. Nat. Sci., Phila., Vol. XL, pp. 337–363, 1 plate. Philadelphia, 1888.) The arrangement of the plates on the ventral side of the forms is minutely described from specimens found at La Grand, Iowa. Taxocrinus is then shown to be much more closely related to the recent crinoids than had hitherto been supposed. Reviewed in Am. Geologist, III, 200, 201, 1889.

Wachsmuth, Charles, and Frank Springer. New Genus from the Niagara Group of Western Tennessee. (Geol. Sur. Illinois, Vol. VIII, pp. 206–208. Springfield, 1890.) The following genus and species described as new:

Allocrinus.
Allocrinus typus.

Wachsmuth, Charles, and Frank Springer. New Species of Crinoids and Blastoids from the Kinderhook Group of the Lower Carboniferous Rocks at Le Grand, Iowa. (Geol. Sur. Illinois, Vol. VIII, pp. 155–205. Springfield, 1890.) The following species described and figured as new:

Actinocrinus ornatissimus.
Actinocrinus nodobrachiatus.
Actinocrinus arnoldi.
Megistocrinus nobilis.
Megistocrinus parvus.
Batocrinus macbridei.
Dorycrinus immaturus.
Dorycrinus radiatus.
Dorycrinus parvibasis.
Rhodocrinus kirbyi.
Rhodocrinus watersianus.
Platycrinus symmetricus.
Dichocrinus inornatus.
Graphiocrinus longicirrifer.
Scaphiocrinus elegantulus.
Scaphiocrinus globosus.
Taxocrinus intermedius.
Orophocrinus conicus.
Orophocrinus fusiformis.

Reviewed in Am. Jour. Sci., (3), XXXV, 500, 1888.

Wachsmuth, Charles, and Frank Springer. Perisomic Plates of the Crinoids. (Proc. Acad. Nat. Sci., Phila., Vol. XLII, pp. 343–392. Philadelphia, 1890.) This memoir deals chiefly with the structural elements of the ventral covering in the several groups of stalked echinoderms; the interradial plates; and the relations these hold to one another and to those of tegmen. All the plates between the rays and their subdivisions are regarded as plates of the same elements. The ridged integument of the later Camarata is considered to be gradually evolved from the thinner plates of the disk of the earlier species. The heavy interradials are therefore modified perisomic plates. In the Fistulata the plates between Ambulacra and between the radials and orals are perisomic. The Larviformia are forms having the ventral surface composed of orals, with no perisomic plates. The origin and development of the anal plates in the Fistulata are also described.

Wasatch and Wind River Beds, Fossil Mammals collected in 1891. H. F. Osborn and J. L. Wortman. (Bul. Am. Mus. Nat. Hist., IV, 81–147. 1892.)

alcott, Charles D. Auffindung von Fischresten in Untersilur. (Neues Jahrbuch f. Min., Geol. u. Pal., I (3), p. 284. 1891.) Notice of the finding of fishes in the Lower Silurian near Canyon City, Colorado.

alcott, Charles D. Cambrian Fossils from Mount Stephens, Northwest Territory of Canada. (Am. Jour. Sci., (3), Vol. XXXVI, pp. 163–167. New Haven, 1888.) Comparisons of the Mt. Stephens fauna are made with those found elsewhere. A number of corrections are also made in the names of certain trilobites.

alcott, Charles D. Cambrian Rocks of Pennsylvania and Maryland from the Susquehanna to the Potomac. (Am. Jour. Sci., (3), Vol. XLIV, pp. 469–482. New Haven, 1892.) Incidental references to fossils observed at different localities.

alcott, Charles D. Cambrian Rocks of Virginia and the Southern Appalachians. (Am. Jour. Sci., (3), Vol. XLIV, pp. 52–57. New Haven, 1892.) Incidental references to fossils from many localities.

alcott, Charles D. Correlation Papers: Cambrian. (Bul. U. S. Geol. Sur., No. 81, 447 pp., 3 plates. Washington, 1891.) Incidental references to fossils. Review.

alcott, Charles D. Fauna of Lower Cambrian or Olenellus Zone. (U. S. Geol. Sur., Tenth Ann. Rep., pp. 511–658, 54 plates. Washington, 1890.) A very full review of the Olenellus fauna, giving the geological position and geographical distribution. The following species are figured, with descriptions of certain of the genera and species:

Protospongia sp. ?
Trachyum vetustum Dawson.
Protopharetra sp. ?
Spirocyathus atlanticus Billings.
Coscinocyathus billingsi Walcott.
Archæocyathus profundus Billings.
Archæocyathus rensselaericus Ford.
Archæocyathus dwighti Walcott.
Archæocyathus rarus Ford.
Ethmophyllum whitneyi Meek.
Ethmophyllum meeki Walcott.
Planolites annularius Walcott.
Planolites congregatus Billings.
Planolites virgatus Hall.
Helminthoidichnites marinus Emmons.
Scolithus linearis Haldeman.
Cruziana sp. ?
Phyllograptus ? ? cambrensis sp. nov.
Dactyloidites asteroides Fitch.
Climacograptus ? ? emmonsi Walcott.
Eocystites sp. ?
Lingulella cœlata Hall.
Lingulella ella H. & W.
Lingulella granvillensis Walcott.
Acrotreta gemma Billings.
Iphidea bella.
Acrothele subsidua White.
Kutorgina cingulata Billings.
Kutorgina labradorica var swantonensis Walcott.
Kutorgina pannula White.
Kutorgina prospectensis Walcott.
Linnarssonia sagittalis var taconica Walcott.
Obolella atlantica Walcott.
Obolella circe Billings.
Obolella chromatica Billings.
Obolella crassa Hall.
Obolella nitida Ford.
Obolella gemma Billings.
Orthis highlandensis Walcott.
Orthis salemensis Walcott.
Orthisina festinata Billings.
Orthisina orientalis Whitfield.
Orthisina transversa Walcott.
Camarella antiquata Billings.
Camarella ? minor Walcott.
Fordilla troyensis Barrande.
Modioloides prisca Walcott.
Helenia bella Walcott.
Scenella ? conula Walcott.
Scenella reticulata Billings.
Scenella retusa Ford.
Scenella ? varians Walcott.
Scenella sp. ?
Stenotheca ? elongata Walcott.
Stenotheca curvirostra S. & F.
Stenotheca rugosa Hall.
Platyceras primævum Billings.

Walcott, Charles D.—Continued.

Platyceras dawsoni sp. nov.
Straparollina remota Billings.
Pleurotomaria (Raphistoma) attleborensis S. & F.
Hyolithes americanus Billings.
Hyolithes billingsi Walcott.
Hyolithes communis Billings.
Hyolithes communis var. emmonsi Ford.
Hyolithes impar Ford.
Hyolithes princeps Billings.
Hyolithes quadricostatus S. & F.
Hyolithes similis Walcott.
Hyolithes terranovicus Walcott.
Hyolithellus micans Billings.
Hyolithellus micans, var. rugosa Walcott.
Coleoloides typicalis Walcott.
Salterella pulchella Billings.
Salterella rugosa Billings.
Salterella curvatus S. & F.
Isoxys gen. nov.
Isoxys chilhoweana sp. nov.
Leperditia (?) dermatoides Walcott.
Aristozoe rotundata Walcott.
Aristozoe troyensis Ford.
Northozoe ? vermontana Whitfield.
Protocaris marshi Walcott.
Agnostus nobilis Ford.
Agnostus desideratus Walcott.
Agnostus sp. ?
Microdiscus bellimarginatus S. & F.
Microdiscus connexus Walcott.
Microdiscus meeki Ford.
Microdiscus parkeri Walcott.
Microdiscus lobatus Hall.
Microdiscus speciosus Ford.
Microdiscus helena Walcott.
Microdiscus sp. undet.
Olenellus thompsoni Hall.
Olenellus gilberti Meek.
Olenellus iddingsi Walcott.
Olenellus walcotti S. & F.
Olenellus (Mesonacis) vermontana Hall.
Olenellus (Mesonacis) asaphoides Emmons (sp.)
Olenellus (Holmia) bröggeri Walcott.
Olenoides fordi Walcott.
Olenoides marcoui Whitfield.
Olenoides ellsi sp. nov.
Olenoides quadriceps H. & W.
Olenoides (Dorypyge) desiderata sp. nov.
Zacanthoides levis Walcott.
Zacanthoides eatoni Walcott.
Bathynotus holopyga Hall.
Avalonia manuelensis Walcott.
Conocoryphe trilineata Emmons.
Conocoryphe reticulata sp. nov.
Ptychoparia adamsi Billings.
Ptychoparia ? attleborensis S. & F.
Ptychoparia ? fitchi Walcott.
Ptychoparia miser Billings.
Ptychoparia metisensis sp. nov.
Ptychoparia subcoronata H. & W.
Ptychoparia teucer Billings.
Ptychoparia vulcanus Billings.
Crepicephalus augusta Walcott.
Crepicephalus liliana Walcott.
Oryctocephalus primus Walcott.
Anomocare ? parvum Walcott.
Agraulos strenuus Billings.
Agraulos redpathi sp. nov.
Agraulos strenuus, var. nasutus var. nov.
Protypus hitchcocki Whitfield.
Protypus senectus Billings.
Protypus clavatus Walcott.
Solenopleura bombifrons Matthew.
Solenopleura ? harveyi Walcott.
Solenopleura howleyi Walcott.
Solenopleura ? nana Ford.
Solenopleura ?? tumida Walcott.

Reviewed in Am. Jour. Sci., (3), XLII, 345, 346, 1891; also by J. F. James, Am. Geologist, VIII, 82–86, 1891.

Walcott, Charles D. Fossils in Lower Taconic of Emmons. (Proc. Am. As. Adv. Sci., Vol. XXXVI, pp. 212, 213. Salem, 1888.) Abstract. Notes the discovery of Trenton fossils in the Taconic limestones in Vermont.

Walcott, Charles D. Hercynian Fauna of Northern Hartz, in Germany. (Am. Jour. Sci., (3), Vol. XXXIX, pp. 155, 156. New Haven, 1890.) A brief discussion of the stratigraphic position of the fauna.

Walcott, Charles D. Inarticulate Brachiopod from Trenton Limestone. (U. S. Nat. Mus., Proc., Vol. XII, pp. 365, 366. Washington, 1889.) *Conotreta rusti* described as new genus and species.

Walcott, Charles D. Lingula Preserving Cast of Peduncle. (U. S. Nat. Mus., Proc., Vol. xi, p. 480. Washington, 1888.) A good specimen recently found is figured.

Walcott, Charles D. Lower Cambrian Fossils from Cohassett, Mass. (Proc. Biol. Soc. Washington, Vol. vii, p. 155. Washington, 1892.) Note on the occurrence of fossils in a bowlder.

Walcott, Charles D. Lower Silurian (Ordovician) Ichthyic Fauna and its Mode of Occurrence. (Bul. Geol. Soc. America, Vol. iii, pp. 153–172. Rochester, 1891.) Abstract. The stratigraphy described, list of invertebrate fossils associated and general character of invertebrates considered. The following species are described:

Dictyorhabdus priscus gen. et sp. nov.
Eroptychius americanus sp. nov.
Astraspis desiderata sp. nov.

Review in Am. Jour. Sci., (3), xli, 245, 1891; Am. Naturalist, xxv, 137, 1891; Geol. Mag., iii, viii, 240, 1891.

Walcott, Charles D. New Forms of Upper Cambrian Fossils. (Proc. U. S. Nat. Mus., Vol. xiii, pp. 266–279, 2 plates. Washington, 1891.) The following species are described as new:

Metoptoma (?) minneiskensis.
Metoptoma (?) peracuta.
Platyceras hoyti.
Platyceras texanum.
Trochus (?) saratogensis.
Hyolithes attenuatus.
Hyolithes curvatus.
Hyolithes corrugatus.
Hyolithes newtoni.
Conularia cambria.
Spirodentalium osceola.
Ptychoparia burnetensis.
Ptychoparia llanoensis.
Ptychoparia connata.
Ptychoparia metra.
Ptychoparia pero.
Ptychoparia suada.
Ptychoparia urania.
Ptychoparia vacuna.
Ptychoparia (Liostracus) panope.
Agraulos saratogensis.
Agraulos thea.
Illænurus (?) dia.

Walcott, Charles D. New Genera and Species from the Lower Cambrian or Olenellus Zone of North America. (Proc. U. S. Nat. Mus., Vol. xii, pp. 33–46. Washington, 1890.) Notes on several species, with descriptions of the following forms:

Archæocyathus dwighti sp. nov.
Ethmophyllum meeki sp. nov.
Planolites annularius sp. nov.
Kutorgina labradorica var. swantonensis var. nov.
Obolella atlantica sp. nov.
Camerella minor sp. nov.
Coleoloides typicalis gen. et sp. nov.
Hyolithes terranovicus sp. nov.
Hyolithes similis sp. nov.
Helenia bella gen. et sp. nov.
Agnostus desideratus sp. nov.
Microdiscus helena sp. nov.
Olenellus (Mesonacis) asaphoides (Emmons.)
Olenellus (Mesonacis) bröggeri Walcott.
Avalonia mannuelensis gen. et sp. nov.
Zacanthoides eatoni sp. nov.
Solenopleura harveyi sp. nov.
Solenopleura howleyi sp. nov.

Reviewed in Am. Jour. Sci., (3), xxxix, 159, 1890; also in Neues Jahrbuch, 334, 1891.

Walcott, Charles D. New Genera and Species of Fossils from the Middle Cambrian. (Proc. U. S. Nat. Mus., Vol. xi, pp. 441–446. Washington, 1889.) The following species, mostly new, are described from Newfoundland:

Lingulella macconnelli.
Crania (?) columbiana.
Acrotreta gemma, var. depressa.
Linnarrsonia sagittalis Salter.
Orthosina alberta.
Platyceras romingeri.

Walcott, Charles D.—Continued.

Olenoides curticei.
Olenoides sp. undet.
Karlia.
Karlia minor.
Karlia stephenensis.
Bathyuriscus (Kootenia) dawsoni.
Ogygopsis. sp.?

Walcott, Charles D. Review of Dr. R. W. Ell's Second Report on the Geology of a Portion of the Province of Quebec; with Additional Notes on the Quebec Group. (Am. Jour. Sci., (3), Vol. xxxix, pp. 101-115. New Haven, 1890.) Numerous references to fossils.

Walcott, Charles D. Stratigraphic Position of the Olenellus Fauna in North America and Europe. (Am. Jour. Sci., (3), Vol. xxxvii, pp. 374–392. New Haven, 1889.) A study of the stratigraphical relations of the Olenellus fauna, with numerous references to species and localities.

Walcott, Charles D. Stratigraphic Position of the Olenellus Fauna in North America and Europe. (Am. Jour. Sci., (3), Vol. xxviii, pp. 29–42. New Haven, 1889.) Continued from Am. Jour. Sci., Vol. xxxvii, page 392.

Walcott, Charles D. Stratigraphical Succession of Cambrian Faunas of North America. (Nature, Vol. xxxviii, p. 551. New York, 1888.) Incidental references to fossils.

Walcott, Charles D. Taconic System of Emmons and the Use of the Name Taconic in Geologic Nomenclature. (Am. Jour. Sci., (3), Vol. xxxv, pp. 229–242, 307-327, and 395–401. New Haven, 1888.) Incidental references to fossils from New York, Vermont, Massachusetts, and Connecticut are given.

Walcott, Charles D. Value of Term "Hudson River Group" in Geologic Nomenclature. (Bul. Geol. Soc. America, Vol. i, pp. 335–356. New York, 1890.) Lists of characteristic fossils are given.

Walcott, Charles D. Vertebrate Fauna in Silurian (Ordovician) Strata. (Bul. Geol. Soc. America, Vol. iii, pp. 153–172, 2 plates. Rochester, 1892.) A preliminary notice of the discovery of fish remains in the Trenton of Colorado, with a list of characteristic invertebrate remains found at the same place.

Walcott, C. D., Rejoinder. C. Rominger. (American Geologist, ii, 356–359. 1888.) Mention made of different species.

Wanner, Atrenus. Casts of Scolithus Flattened by Pressure. (American Geologist, Vol. v, pp. 35-38, Minneapolis, 1890.) The effects of pressure on certain specimens of Scolithus in the quartzites of Pennsylvania figured and described.

Wanner, Atrenus. Discovery of Fossil Tracks in the Triassic of York County, Pa. (Proc. Am. As. Adv. Sci., Vol. xxxvii, p. 186. Salem, 1889.) Announcement of the discovery of tracks and algæ in the York County Trias. It is followed by a discussion by C. H. Hitchcock.

Wanner, Atrenus. Discovery of Fossil Tracks, Algæ, etc., in the Triassic of York County, Pennsylvania. (Geol. Sur. Pennsylvania, Ann. Rep. 1887, pp. 21-35. Harrisburg, 1889.) Notes and figures of various forms found.

Wanner, Atrenus. Fossil Tracks in the Trias of York County, Pa. (Proc. Am. As. Adv. Sci., Vol. xl, p. 286. Salem, 1892.) Abstract. A notice of the discovery and discussion of the character of the imprints.

Wappiniger Valley Limestones and Other Formations of Dutchess County, N. Y. W. B. Dwight. (Am. Jour. Sci., (3), xxxviii, 139–153. 1889.) Various fossils considered.

Washington.

Aucella, with Special Reference to its Occurrence in California. C. A. White. (U. S. Geol. Sur., Mon. xiii, 226–233. 1888.)

Invertebrate Fossils of Pacific Coast. C. A. White. (Bul. U. S. Geol. Sur., No. 51. 1889.)

Puget Group of Washington Territory. C. A. White. (Am. Jour. Sci., (3), xxxvi, 443–450. 1888. (Incidental references to the fossils.

Waverly Fossils, Continued, Geology of Licking County, Ohio, Part IV, List. C. L. Herrick. (Bul. Sci. Lab. Dennison Univ., IV, Pt. I, 11–60. 1888.)

Waverly Fossils, Description of Four New Species. C. L. Herrick. (Bul. Sci. Lab. Dennison Univ., IV, 11–60 and 97–123. 1891.)

Waverly Group, Continued, General Conclusions, Geology of Licking County, Ohio, Pt. IV. C. L. Herrick. (Bul. Sci. Lab. Dennison Univ., IV, Pt. I, 97–123. 1888.)

Waverly Group, Geology of Licking County, Ohio, Pts. III and IV, Subcarboniferous. C. L. Herrick. (Bul. Sci. Lab. Dennison Univ., III, Pt. I, 13–110. 1888.)

Waverly Group in Ohio. C. L. Herrick. (American Geologist, III, 94–99. 1889.) Mention made of different species.

Waverly Group in Ohio, with Description of New Species, List of the Bryozons. E. O. Ulrich. (Bul. Sci. Lab. Dennison Univ., IV, Pt. I, 62–92. 1888.)

Waverly of Ohio, Compiled, Tabulated List of Fossils. W. E. Cooper. (Bul. Sci. Lab. Dennison Univ., IV, Pt. I, 123–130. 1888.)

Waverly Problem, Cuyahoga Shale of Ohio. C. L. Herrick. (Bul. Geol. Soc. America, II, 31–47. 1891.) Incidental references to fossils.

Webster, Clement L. Devonian Rocks of Iowa, which Constitutes a Typical Section of the Devonian Formation of the Interior Continental Area of North America. (American Naturalist, Vol. XXIII, pp. 229–243. Philadelphia, 1889.) Numerous references to and lists of fossils.

Webster, Clement L. Genus Pachyphyllum. (American Naturalist, Vol. XXIII, pp. 621–625. Philadelphia, 1889.) The following species described, without figures, from the Devonian of Iowa:

Pachyhyllum woodmani (White).
Pachyhyllum crassicostatum sp. nov.
Pachyhyllum ordinatum sp. nov.
Pachyhyllum crassum sp. nov.

Webster, Clement L. Geology of Johnson County, Iowa. (American Naturalist, Vol. XXII, pp. 408–419. 1889.) A list of Pleistocene fossils found is given.

Webster, Clement L. New and Imperfectly Known Species of Brachiopoda from the Devonian Rocks of Iowa. (American Naturalist, Vol. XXII, pp. 1100–1104. Philadelphia, 1888.) The following are described without figures:

Spirifera substrigosa sp. nov.
Spirifera hungerfordi.
Spirifera strigosa.
Atrypa hystrix, var. elongata subsp. nov.
Atrypa hystrix, var. planosulcata subsp. nov.

Webster, Clement L. New Genus of Corals from Devonian Rocks of Iowa. (American Naturalist, Vol. XXIII, pp. 710–712. Philadelphia, 1889.) The following described, without figures, from the Rockford shales of Iowa:

Macgeea gen. nov.
Macgeea solitaria (Hall and Whitfield.
Macgeea parva sp. nov.
Macgeea culmula sp. nov.

Webster, Clement L. New Species of Fossils from the Rockford Shales of Iowa. (American Naturalist, Vol. XXII, pp. 1013–1018. Philadelphia, 1888.) The following species are described, without figures, as new:

Rhynchonella subacuminata.
Athyris minutissima.
Paracyclas validalinea.
Platystoma mirus.
Platystoma pervetus.
Naticopsis rarus.
Turbo strigillata.
Turbo ? incertus.
Holopea tenuicarinata.
Cyclonema brevilineata.
Cyclonema subcrenulata.

Webster, Clement L. Notes on the Rockford Shales. (American Naturalist, Vol. XXII, pp. 444–446. Philadelphia, 1888.) Three species are described as new:

Loxonema gigantea.
Loxonema owenensis.
Loxonema crassum.

Weiss, E. Devonian Sponges; by J. M. Clarke: Am. Jour. Sci., (3), XXIX. Review. (Neues Jahrbuch, 478–479. 1888.)

White, Charles A. Aucella, with Special Reference to its Occurrence in California. (U. S. Geol. Sur., Mon. XIII, App. to Chapter V, pp. 226–233, 2 plates. Washington, 1888.) A general consideration of the genus, with proof of the specific identity of the various forms heretofore described under various names.

White, Charles A. Biological and Geological Significance of Closely Similar Fossil Forms. (Proc. Am. As. Adv. Sci., Vol. XXXIX, pp. 239–243. Salem, 1891.) A discussion of the confusion resulting from the study of fossils from the two different points of view with reference to the synonymy of different forms. Reviewed Am. Geologist, III, 374, 375. 1891.

White, Charles A. Invertebrate Fossils of the Pacific Coast. (U. S. Geol. Sur., Bul. No. 51, 102 pp. Washington, 1891.) The following species described and figured:

Ostrea (Alectryonia) dilleri White.
Zirphæa plana sp. nov.
Actæon inornatus sp. nov.
Vasculum gen. nov.
Vasculum obliquum sp. nov
Lysis oppansus sp. nov.
Trochus (Anadema) gemiferus sp. nov.
Stomatia obstricta sp. nov.
Gyrodes dowelli sp. nov.
Rimella macilenta sp. nov.
Mesalia obsuta sp. nov.
Faunus marcidulus sp. nov.
Ceratia nexilia sp. nov.
Trophon condoni sp. nov.
Cominella lecontei sp. nov.
Fulgur hilgardi sp. nov.
Fulguraria gabbi sp. nov.
Cancellaria turneri sp. nov.
Scobinella dilleri sp. nov.
Ammonites turneri sp. nov.
Perna excavata sp. nov.
Inoceramus vancouverensis Shumard.
Crassatella tuscana Gabb.
Clisocolus dubius Gabb.
Clisocolus cordatus Whiteaves.
Anatina sulcatina Shumard.
Vanikoropsis suciensis sp. nov.
Ammonites maclurei sp. nov.
Cardium (Adacna?) sp.?
Cyrena brevidens sp. nov.
Corbicula willisi sp. nov.
Corbicula pugetensis sp. nov.
Batissa dubia sp. nov.
Batissa newberryi sp. nov.
Psammobia obscura sp. nov.
Sanguinolaria ? caudata sp. nov.
Teredo pugetensis sp. nov.
Cerithium sp. ?
Cucullæa increbescens sp. nov.
Glycimeris ? dalli sp. nov.
Belemnites sp.?
Belemnites sp.?
Ammonites (Lillia) howelli sp. nov.
Ammonites (Lillia) kialagvikensis sp. nov.
Ammonites (Amaltheus) whiteavesi sp. nov.

Reviewed in Am. Geologist, v. 109, 110, 1890; and Neues Jahrbuch, 154, 155, 1892.

White, Charles A. Later Cretaceous Deposits in Iowa. (American Geologist, Vol. I, pp. 221–227. Minneapolis, 1888.) *Lespodesthes* (?) *haworthi* described and figured as new.

White, Charles A. Lower Cretaceous of the Southwest and its Relation to Underlying and Overlying Formations. (Am. Jour. Sci., (3), Vol. XXXVIII, pp. 440–445. New Haven, 1889.) Incidental references to fossils are given.

White, Charles A. North American Mesozoic. (Proc. Am. As. Adv. Sci., Vol. XXXVIII, pp. 205–225. Salem, 1890.) General references to the fossils.

White, Charles A. North American Mesozoic. (Science, Vol. XIV, pp. 160–166. New York, 1889.) General references to fossils. The address before section E, of the A. A. A. S. at Toronto, August 29, 1889.

White, Charles A. Permian of Texas. (American Naturalist, Vol. XXII, p. 926. Philadelphia, 1888.) In a note to the editors, Dr. White announces that he has found that Mr. Cummings was entirely correct in his reported discovery of Mesozoic and Paleozoic types of Invertebrates commingled in one and the same layer of the Permian, in Baylor, Archer, and Wichita counties, Texas.

White, Charles A. Permian Formation of Texas. (American Naturalist, Vol. XXIII, pp. 109–128. Philadelphia, 1889.) A list of species found with the descriptions and figures of the following new species:

Ptychites cumminsi.
Medlicottia copei.
Pompanoceras walcotti.

White, Charles A. Puget Group of Washington Territory. (Am. Jour. Sci., (3), Vol. XXXVI, pp. 443–450. New Haven, 1888.) Incidental references and comparisons to fossils.

White, Charles A. Texas Permian and its Mesozoic Types of Fossils. (Bul. U. S. Geol. Sur., No. 77, 51 pp., 4 plates. Washington, 1891.) A careful study of the Texas Permian fauna, with descriptions and figures of the following:

Goniatites baylorensis sp. nov.
Wagenoceras cumminsi White.
Medlicottia copei White.
Popanoceras walcotti White.
Naticopsis shumardi McChesney?
Nautilus (Temnocheilus) winslowi M. & W.
Nautilus sp.?
Nautilus occidentalis Swallow.
Nautilus endolobus M. & W.
Naticopsis remex White.
Orthoceras rushensis McChesney.
Euomphalus subquadratus M. & W.
Murchisonia sp.?
Patella sp.?
Bellerophon crassus M. & W.
Bellerophon montifortianus M. & P.
Sedgwickia topekænsis (Shumard).
Pleurophorus sp.?
Clidophorus occidentalis Geinitz.
Yoldia? subscitula M. & H.
Myalina permiana (Swallow).
Myalina aviculoides M. & H.
Myalina perattenuata M. & H.
Gervillia longa Geinitz.
Aviculopecten occidentalis Shumard.
Spirorbis sp.?
Cythere nebrascensis Geinitz.

White River Neocene of Nebraska, Perrissodactyles. E. D. Cope. (American Naturalist, XXV, 47–49. 1891.)

Whiteaves, J. F. Cretaceous Fossils from British Columbia, the Northwest Territory, and Manitoba. (Geol. and Nat. Hist., Sur. Canada, Contributions to Canadian Paleontology, Vol. I, pp. 151–196, 10 plates. Montreal, 1889.) The following species, with figures, are described:

Aucella mosquensis, var. concentrica Fisch.
Astarte carlottensis sp. nov.
Placenticeras occidentale Whiteaves.
Placenticeras perezianum Whiteaves.
Placenticeras (Perezianum? var.) liardense.
Scaphites quatsinoensis Whiteaves.
Discina pileolus sp. nov.
Cyprina yukonensis sp. nov.
Schloenabachia borealis sp. nov.
Estheria sp. nov.
Terebratula robusta sp. nov.
Exogyra sp.?
Lima perobliqua sp. nov.
Pteria (Oxytoma) corneuilana d'Orbigny.
Trigonia dawsoni Whiteaves.
Astarte carlottensis Whiteaves.
Protocardium hillanum var.
Cyprina occidentalis Whiteaves.
Pleuromya carlottensis Whiteaves.
Schloenbachia gracilis sp. nov.
Placenticeras glabrum sp. var.
Cyprina subtrapeziformis Whiteaves.
Linearia formosa? Meek & Hayden.
Pholadomya subventricosa Meek & Hayden.
Solecurtis (Tagelus) occidentalis Whiteaves.
Martesia tumidiformis Whiteaves.
Hydatina parvula Whiteaves.
Baculites ovatus Say.
Placenticeras placenta Dekay.
Palæastacus (?) ornatus Whiteaves.
Serpula semicoalita sp. nov.
Lingula subspatulata? Hall & Meek.
Ostrea congesta Conrad.
Inoceramus problematicus Schlotheim.
Modiola tenuisculpta sp. nov.
Belemnitella manitobensis, sp. nov.
Loricula canadensis sp. nov.

Whiteaves, J. F.—Continued.

Ptychodus parvulus sp. nov.
Lamna manitobensis sp. nov.
Enchodus shumardi Leidy.
Cladocyclus occidentalis Leidy.

Reviewed in Am. Jour. Sci., (3), XXXVIII, 493, 1889; also in Neues Jahrbuch, 158, 159, 1891.

Whiteaves, J. F. Description of a New Genus and Species of Phyllocardia Crustacea from the Middle Cambrian of Mount Stephens, B. C. (Canadian Rec. Sci. Vol. V, pp. 205–208. Ottawa, 1892.) *Anamolocaris canadensis* is based upon numerous specimens in which only the abdominal and caudal segments are preserved, the carapace being unknown.

Whiteaves, J. F. Description of a New Species of Paneka from the Corniferous Limestones of Ontario. (Canadian Rec. Sci., Vol. IV, pp. 401–404, 1 plate. Ottawa, 1891.) *Paneka grandis* is regarded as new. It attains a length of fully 9 and a height of nearly 7 inches.

Whiteaves, J. F. Descriptions of four New Species of Fossils from the Lower Silurian Rocks of the Southeastern portion of the District of Saskatchewan. (Canadian Rec. Sci., Vol. V, pp. 293–302, 1 plate. Ottawa, 1891.) The following species are figured and described:

Strophomena acanthoptera.
Pentamerus discussatus.
Gomphoceras parvulum.
Acidaspis perarmata.

Reviewed in Am. Geologist, IX, 56, 1892.

Whiteaves, J. F. Fossils of Devonian Rocks of the Islands, Shores, or immediate vicinity of Lakes Manitoba and Winnepegosis. (Geol. and Nat. Hist. Sur. Canada, Contributions to Canadian Paleontology, Vol. I, pp. 255–360, 14 plates. Montreal, 1892.) The few introductory remarks are followed by the descriptions and figures of the following species:

Sphærospongia tessellata Phillips.
Astræospongia hamiltonensis Meek & Worthen.
Cyathophyllum vermiculare, var. præcursor Frech.
Cyathophyllum anna Whitfield.
Cyathophyllum profunda Hall.
Cyathophyllum profunda (var.).
Cyathophyllum dianthus Goldfus.
Cyathophyllum waskasense sp. nov.
Cyathophyllum petraioides sp. nov.
Cyathophyllum athabascense Whiteaves.
Columnaria (Cyathophylloides disjuncta sp. nov.
Actinocystis variabilis sp. nov.
Favosites gothlandica Lamarck (var.).
Pachyopora cerviocornis De Blainville.
Alveolites vallorum Meek.
Stromatopora sp.?
Actinostroma expansum Hall & Whitfield.
Actinostroma tyrrellii Nicholson.
Actinostroma fenestratum Nicholson.
Ctenocrinus sp.
Spirorbis omphalodes Goldfuss.
Leptotrypa quadrangularis Nicholson.
Pinacotrypa marginata sp. nov.
Cystodictya hamiltonensis Ulrich.
Fenestella vera Ulrich.
Fenestella sp.?
Polypora (porosa? var.) manitobensis.
Discina sp. indet.
Chonetes logani, var. aurora Hall.
Chonetes manitobensis sp. nov.
Productella productoides, var. membranacea Phillips.
Productella subaculeata Murchison.
Orthis (Schizophoria) striatula Schlotheim.
Orthis (Schizophoria) manitobensis nom. prov.
Orthothetes chemungensis Conrad.
Strophodonta arcuata Hall.
Strophodontainterstrialis Phillips.
Spirifera fimbriata Conrad.
Spirifera (Martinia) richardsonii Meek.
Cyrtina hamiltonensis Hall.
Athyris vittata Hall.
Atrypa reticularis Linnæus.
Atrypa reticularis var. aspera Schlotheim.

Whiteaves, J. F.—Continued.

Pentamerus comis Owen.
Stringocephalus burtini Defrance.
Terebratula sullivanti Hall.
Pterinea lobata sp. nov.
Actinopteria boydii Conrad.
Gosseletia sp.?
Mytilarca inflata sp. nov.
Myalina trigonalis, sp. nov.
Modiomorpha attenuata Whiteaves.
Modiomorpha compressa sp. nov.
Modiomorpha tumida sp. nov.
Modimorpha parvula sp. nov.
Spathella subelliptica sp. nov.
Goniophora perangulata Hall var.
Macrodon pygmæus sp. nov.
Nucula? manitobensis sp. nov.
Nuculites sp.
Kefersteinia subovata Whiteaves.
Mecynodon sp.
Anodontopsis affinis sp. nov.
Paracyclas antiqua Goldfuss.
Paracyclas elliptica Hall.
Paracyclas elliptica var. occidentalis Billings.
Paracyclas sp. undt.
Conocardium ohioensis Meek.
Cardiopsis tenuicostata sp. nov.
Cypricardella bellistriata Conrad.
Cypricardella producta sp nov.
Cypricardina planulata (?) Conrad.
Glossites manitobensis nom. prov.
Orthonota corrugata Whiteaves.
Dentalium (sp.)?
Palæacmæa (?) cingulata sp. nov.
Pleurotomaria goniostoma sp. nov.
Pleurotomaria infranodosa sp. nov.
Pleurotomaria sp. undt.
Raphistoma tyrrellii sp. nov.
Murchisonia archiacana sp.
Murchisonia dowlingii sp. nov.
Murchisonia turbinata Schlotheim.
Bellerophon? pelops Hall.
Porcellia manitobensis sp. nov.
Eunema speciosum sp. nov.
Eunema brevispira sp. nov.
Euenema subspinosum sp. nov.
Eunema clathratulum sp. nov.
Astralites gen. nov.
Astralites fimbriatus sp. nov.
Euomphalus (Straparollus) annulatus Phillips.
Euomphalus (Phanerotinus) sp. undt.
Euomphalus circularis? Phillips, var. subtringonalis.
Omphalocirrus manitobensis sp. nov.
Straparollina obtusa sp. nov.
Pseudophorus tectiformis sp. nov.
Platyceras (Orthonychia) parvulum sp. nov.
Platyostoma tumidum sp. nov.
Naticopsis manitobensis sp. nov.
Naticopsis inornata sp. nov.
Loxonema altivolvis sp. nov.
Loxonema priscum Munster.
Loxonema cingulatum sp. nov.
Loxonema gracillum sp. nov.
Macrochilina subcostata (Schlotheim).
Macrochilina pulchella sp. nov.
Pleurotomaria spenceri sp. nov.
Hyolithes alatus sp. nov.
Orthoceras hindii Whiteaves.
Bronteus manitobensis sp. nov.
Lichas (Terataspis) sp. nov.
Cyphaspis bellula sp. nov.
Proetus mundulus sp. nov.
Ptyctodus calceolus Newberry and Worthen.
Dinichthys canadensis sp. nov.
Aspidichthys (?) notabilis sp. nov.
Onychodus (sp. undt.).

Reviewed in Am. Jour. Sci., (3), XLIV, 429, 1892.

Whiteaves, J. F. Fossils of the Devonian Rocks of the Mackenzie River Basin. (Geol. and Nat. Hist. Sur. Canada, Contributions to Canadian Paleontology, Vol. I, Part III, pp. 199–253, 5 plates. Montreal, 1891.) The following species described, with figues:

Astræospongia hamiltonensis Meek & Worthen.
Aulopora serpens Goldfuss.
Streptelasma rectum Hall.
Cyathophyllum arcticum Meek.
Cyathophyllum cæspitosum Goldfuss.
Cyathophyllum richardsoni Meek.
Cyathophyllum athabascense sp. nov.

Whiteaves, J. F.—Continued.

Campophyllum ellipictum Hall & Whitfield.
Heliophyllum parvulum sp. nov.
Phillipsastræa hennahi Lonsdale.
Phillipsastræa verillii Meek.
Pachyphyllum devoniense Edwards & Haime.
Cystiphyllum americanum, var. arcticum Meek.
Pachypora cervicornis de Blainville.
Arachnocrinus canadensis sp. nov.
Spirorbis omphalodes Goldfuss.
Spirorbis arkonensis Nicholson.
Cornulites (Ortonia) sublævis sp. nov.
Hederella canadensis Nicholson.
Proboscina laxa sp. nov.
Stomatopora moniliformis sp. nov.
Ascodictyon stellatum Nicholson.
Paleschara quadrangularis Nicholson.
Monotrypella unjiga sp. nov.
Ceramopora huronensis Nicholson.
Crania hamiltoniae Hall.
Chonetes logani var. aurura Hall.
Strophalosia productoides Murchison.
Productella dissimilis.
Productella spinulicosta Hall.
Productella lachrymosa var. lima Conrad.
Orthis striatula Schlotheim.
Strophodonta demissa Conrad.
Strophodonta perplana Conrad.
Spirifera disjuncta Sowerby.
Spirifera disjuncta, var. occidentalis var. nov.
Spirifera cyrtinæformis Hall & Whitfield.
Spirifera inutilis Hall.
Spirifera tullia Hall var.
Spirifera glabra, var. franklini Meek.
Spirifera meristoides Meek.
Spirifera richardsoni Meek.
Cyrtina hamiltonensis Hall.
Cyrtina billingsi Meek.
Athyris angelica, var. occidentalis var. nov.
Athyris parvula sp. nov.
Atrypa reticularis Linné.
Atrypa reticularis, var. aspera Schlotheim.
Rhynchonella pugnus Martin.
Rhynchonella cuboides Sowerby.
Rhynchonella castanea Meek.
Eatonia variablis sp. nov.
Pentamerus galeatus Dalman.
Stringocephalus burtini Defrance.
Cryptonella calvini (?) Hall & Whitfield.
Newberria lævis Meek.
Newberria halli.
Pterinopecten sp. undt.
Pterinea flabellum Conrad.
Ptychopteria aequivalvis sp. nov.
Leptodesma demus Hall.
Leptodesma jason Hall.
Palæoneilo sp. undt.
Paracyclas elliptica Hall.
Schizodus chemungensis Conrad.
Euomphalus (Straparollus) inops Hall.
Euomphalus (Straparollus) flexistriatus sp. nov.
Euomphalus maskusi sp. nov.
Conularia salinensis sp. nov.
Proetus haldemani Hall.

Whiteaves, J. F. Fossils from Hamilton Formation of Ontario, with a list of Species at Present Known from that Formation and Province. (Geol. and Nat. Hist. Sur. Canada, Contributions to Canadian Paleontology, Vol. I, pp. 95–125, 5 plates. Montreal, 1889.) The following species are described with figures:

Acervularia profunda Hall.
Taxocrinus lobatus Hall.
Homocrinus crassus sp. nov.
Arthroacantha punctobrachiata Williams.
Dolatocrinus liratus Hall.
Dolatocrinus lamellosus Hall.
Dolatocrinus canadensis sp. nov.
Megistocrinus sp. indt.
Ollacrinus spinigerrus Hall.
Ancyrocrinus bulbosus Hall.
Pentremitidea filosa, sp. nov.
Nucleocrinus elegans Conrad.
Granatocrinus leda Hall.
Codaster canadensis Billings.

Whiteaves, J. F.—Continued.

Eleutherocrinus cassedayi Shumard and Yandell.
Lingula thedfordensis sp. nov.
Productella (Strophalosia ?) truncata Hall.
Chonetes carinata Conrad.
Streptorhynchus perversum Hall.
Strophodonta plicata Hall.
Spirifera subdecussata sp. nov.
Nucleospira concinna Hall.
Meristella unisulcata Conrad.
Meristella haskinsi Hall.
Retzia (Trematospira) nobilis Hall.
Pterinea flabellum Conrad.
Grammysia arcuata ? Conrad.
Turbo shumardi De Verneuil.
Platyceras carinatum Hall.
Platyceras quinquesinuatum Ulrich.
Platyceras (Orthonychia) conicum Hall.
Platyostoma plicatum sp. nov.
Dalmanites helena Hall.
Macroptalichthys sullivanti Newberry.

Reviewed in Am. Jour. Sci., (3), XXXVIII, 493, 1889; Am. Geologist, V, 108, 109, 1890; and Neues Jahrbuch, 147, 1890.

Whiteaves, J. F. Fossils from the Triassic Rocks of British Columbia. (Geol. and Nat. Hist. Sur. Canada, Contributions to Canadian Paleontology, Vol. I, pp. 127–148, 3 plates. Montreal, 1889.) The following species described with figures:

Spiriferina borealis sp. nov.
Terebratula humboldtensis Gabb.
Terebratula liardensis sp. nov.
Monotis subcircularis Gabb.
Monotis ovalis sp. nov.
Halobia (Daonella) lommeli Wissman.
Halobia occidentalis sp. nov.
Trigonodus (?) productus sp. nov.
Margarita triassica sp. nov.
Nautilus liardensis sp. nov.
Popanoceras maconelli sp. nov.
Arcestes gabbi Meek.
Acrochordiceras ? carlottense sp. nov.
Trachyceras canadense sp. nov.
Arniotites Hyatt gen. et sp. nov.
Arniotites vancouverensis Whiteaves.
Arniotites sp ?
Badiotites carlottensis sp. nov.
Aulacoceras carlottense Whiteaves.

Reviewed in Neues Jahrbuch, 170, 171, 1891.

Whiteaves, J. F. Gasteropoda of Trenton Limestone of Manitoba, with a Description of One New Species. (Canadian Rec. Sci., Vol. V, pp. 317–328. Ottawa, 1892.) Sixteen species are enumerated, most of which are common forms of the Trenton limestone. *Murchisonia major*, Hall, and *M. teretiforma* Billings are regarded as identical, and as large varieties of *M. bellicincta*, Hall. A large new species of Loxonena is described and figured under the name *L. winnepegense*, and the operculum of *Maclurea manitobensis* is also described and figured.

Whiteaves, J. F. Illustrations of Fossil Fishes of the Devonian Rocks of Canada, Part II. (Trans. Roy. Soc. Canada, Vol. VI, Sec. IV, pp. 77–96, 5 plates. Montreal, 1888.) The following species are described and figured:

Glyptolepis quebecensis sp. nov.
Eusthenopteron foordi Whiteaves.
Cheirolepis canadensis Whiteaves.
Bothriolepis canadensis Whiteaves.
Acanthodes affinis sp. nov.
Phaneropleuron curtum sp. nov.
Cephalaspis campbelltonensis sp. nov.
Cocosteus acadicus Whiteaves.
Ctenacanthus latispinosus Whiteaves.
Homocanthus gracilis sp. nov.

Reviewed in Ottawa Naturalist, III, No. 2, 1889; also Neues Jahrbuch, 437, 1890; and Am. Jour. Sci., (3), XXXVIII, 249, 1889.

Whiteaves, J. F. New or Previously Unrecorded Species of Fossils from the Devonian of Manitoba. (Trans. Roy. Soc. Canada, Vol. VIII, Sec. IV, pp. 93–110, 7 plates. Montreal, 1890.) The following species figured and described:

Stringocephalus burtini De France.
Modiomorpha attenuata sp. nov.
Megalodon subovatus sp. nov.
Orthonota corrugata sp. nov.
Pleurotomaria goniostoma sp. nov.
Euomphalus manitobensis sp. nov.
Orthoceras (Thoracoceras) tyrrellii sp. nov.
Actinoceras hindii sp. nov.

Whiteaves, J. F.—Continued.

Gomphoceras manitobense sp. nov.
Cyrtoceras occidentale sp. nov.
Homaloceras planatum gen. et sp. nov.
Tetragonoceras gracile gen. et sp. nov.
Gyroceras canadense sp. nov.
Gyroceras filicinctum sp. nov.
Gyroceras submamillatum sp. nov.

Reviewed in Neues Jahrbuch, 561, 562, 1892.

Whiteaves, J. F. New Species of Fossils from the Cambro-Silurian Rocks of Manitoba. (Trans. Roy. Soc. Canada, Vol. VII, Sec. IV, pp. 75–83, 2 plates. Montreal, 1889.) The following species described and figured as new:

Maclurea manitobensis.
Poterioceras nobile.
Poterioceras apertum.
Oncoceras magnum.
Onoceras gibbosum.
Cyrtoceras manitobense.
Trochoceras maccharlesi.
Aspidoceras insigne.

Reviewed in Am. Geologist, v, 58, 1890; also in Neues Jahrbuch, 147, 1890.

Whiteaves, J. F. Occurrence of Paucispiral Opercula of Gasteropoda in the Guelph Formation of Ontario. (Canadian Rec. Sci., Vol. v, pp. 404–407. Ottawa, 1891.) Note on the discovery of an operculum in position on a Silurian gasteropod.

Whiteaves, J. F. Orthoceratidæ of the Trenton Limestone of the Winnepeg Basin. (Trans. Roy. Soc. Canada, Vol. IX, Sec. IV, pp. 77–90, 8 plates. Montreal, 1891.) A critical and systematic list of the Orthoceratidæ in the Museum of the Geological Survey of Canada, from the Winnipeg Trenton, with descriptions and figures of the following species:

Endoceras annulatum Hall.
Endoceras subannulatum Whitfeld.
Endoceras crassisiphonatum sp. nov.
Orthoceras simpsoni Billings.
Orthoceras semiplanatum sp. nov.
Orthoceras selkirkense sp. nov.
Orthoceras winnipegense sp. nov.
Actinoceras richardsoni Stokes.
Actinoceras bigsbyi Brown.
Actinoceras allumittense Bill.
Sactoceras cabadense sp. nov.
Gonioceras lambii sp. nov.
Poterioceras apertum Whiteaves.
Poterioceras gracile.

Reviewed in Am. Geologist, x, 124, 1892.

Whitfield, R. P. Additional Notes on Asaphus Canalis, Conrad. (Bul. Am. Mus. Nat. Hist., Vol. II, No. 2, pp. 64, 65, 2 plates. New York, 1889.) Observations on a specimen found recently at Fort Cassin.

Whitfield, R. P. Common Edible Crab found Fossil in the Hudson River Tunnel. (Science, Vol. XVIII, p. 300. New York, 1891.) *Cullinectes hastatus*, Fabricus, found in fossil condition in the bed of the Hudson.

Whitfield, R. P. Description of a New Genus of Inarticulate Brachiopodous Shell. (Bul. American Mus. Nat. Hist. Vol. III, pp. 121, 122. New York, 1890.) The genus Lingulodiscina described and illustrated as new from certain species heretofore referred to Lingula.

Whitfield, R. P. Description of a New Form of Fossil Balanoid Cirripide, from the Marcellus Shale of New York. (Bul. American Mus. Nat. Hist., Vol. II, pp. 66–68. New York, 1889.) *Protobalanus hamiltonensis* described and figured, with a discussion of its relationships.

Whitfield, R. P. Faunal Resemblances between the Cretaceous Formations of New Jersey and those of the Gulf States. (Bul. American Mus. Nat. Hist., Vol. II, pp. 113–116. New York, 1889.) A close faunal relation is noted and tables of common fossils given.

Whitfield, R. P. Fort Cassin Rocks and their Fauna. (Bul. Geol. Soc. America Vol. I, pp. 513–515. New York, 1890.) A note supplementary to a paper by Ezra Brainard and Henry M. Seely on the Calciferous Formation in the Champlain Valley, in the same publication.

Whitfield, R. P. Fossils from Bolivia Collected by Mr. Arthur F. Wendt and Description of a Remarkable New Genus and Species of Brachiopod. (Trans. American Inst. Mining Eng., Vol. XIX, Appendix, p. 31, 1891.) The author describes the new genus Scaphiocœlia, with the new species *S. boliviensis* from the Devonian near Surce, Bolivia. Reviewed in Am. Naturalist, VIII, 397, 1891.

Whtfiield. R. P. Gasteropoda and Cephalopoda of the Raritan Clays and Greensand Marls of New Jersey. (U. S. Geol. Sur., Mon. XVIII, 402 pp., 50 plates. Washington, 1891.) The following species and genera are described and figured:

- Tudicla planimarginata sp. nov.
- Pyropsis elevata Gabb.
- Pyropsis octolirata Conrad.
- Pyropsis perlata ? Conrad.
- Pyropsis retifer Gabb.
- Pyropsis richardsonii ? Toumey.
- Pyropsis ? obesa sp. nov.
- Pyropsis trochiformis ? Toumey.
- Pyropsis reileyi sp. nov.
- Pyropsis naticoides sp. nov.
- Pyropsis (Rapa ?) septemlirata Gabb.
- Pyropsis (Rapa ?) corrina sp. nov.
- Perissolax dubia Gabb.
- Pyrifusus erraticus sp. nov.
- Pyrifusus cuneus sp. nov.
- Pyrifusus mullicaensis ? Gabb.
- Pyrifusus macfarlandi sp. nov.
- Pyrifusus pyruloides Gabb.
- Pyrifusus turritus sp. nov.
- Pyrifusus meeki sp. nov.
- Neptunella mullicaensis sp. nov.
- Triton (Epidromus) præcedens sp. nov.
- Trachytriton atlanticum sp. nov.
- Trachytriton ? holmdelense sp. nov.
- Trachytriton ? multivaricosum sp. nov.
- Fusus ? holmdelensis sp. nov.
- Serrifusus ? crosswickensis sp. nov.
- Serrifusus (Lirofusus) nodocarinatus sp. nov.
- Odontofusus gen. nov.
- Odontofusus slacki Gabb.
- Odontofusus typicus sp. nov.
- Odontofusus medians sp. nov.
- Odontofusus rostellaroides sp. nov.
- Volutomorpha conradi Gabb.
- Volutomorpha ponderosa sp. nov.
- Volutomorpha gabbi sp. nov.
- Volutomorpha (Piestochilus) bella Gabb.
- Volutomorpha (Piestochilus) mucronata Gabb.
- Volutomorpha (Piestochilus) kanei Gabb.
- Eripachya ? paludinaformis sp. nov.
- Euthria ? fragilis sp. nov.
- Tritonidea obesa sp. nov.
- Turbinella ? parva Gabb.
- Turbinella subconica Gabb.
- Turbinella ? verticalis sp. nov.
- Vasum conoides sp. nov.
- Voluta ? delawarensis Gabb.
- Rostellites nasutus Gabb.
- Rostellites angulatus sp. nov.
- Rostellites texturatus sp. nov.
- Volutoderma biplicata Gabb.
- Volutoderma ovata sp. nov.
- Turricula reileyi sp. nov.
- Terricula leda sp. nov.
- Turricula scalariformis sp. nov.
- Cancellaria (Merica) subalta Conrad.
- Morea naticella Gabb.
- Turbinopsis hilgardi ? Conrad.
- Turbinopsis angulata sp. nov.
- Turbinopsis curta sp. nov.
- Turbinopsis elevata sp. nov.
- Turbinopsis major sp. nov.
- Turbinopsis plicata sp. nov.
- Surcula strigosa (Gabb).
- Cithara mullicaensis sp. nov.
- Cithara crosswickensis sp. nov.
- Rostellaria compacta sp. nov.
- Rostellaria spirata sp. nov.
- Rostellaria curta sp. nov.
- Rostellaria fusiformis sp. nov.
- Rostellaria hebe sp. nov.
- Anchura arenaria Morton.
- Anchura abrupta ? Conrad.
- Anchura abrupta, var. acutispira var. nov.
- Anchura pennata Morton.
- Anchura pagodaformis sp. nov.
- Anchura solitaria sp. nov.
- Anchura (Drepanochilus) compressa sp. nov.

Whitfield, R. P.—Continued.

Alaria rostrata Gabb.
Cypræa (Aricia) mortoni Gabb.
Dolium (Doliopsis) multiliratum sp. nov.
Ficus precedens sp. nov.
Natica abyssina Morton.
Gyrodes abbottii Gabb.
Gyrodes infracarinata Gabb.
Gyrodes crenata Conrad.
Gyrodes petrosus Morton.
Gyrodes altispira Gabb.
Gyrodes obtusivolva Gabb.
Lunatia halli Gabb.
Amauropsis meekana sp. nov.
Amauropsis punctata Gabb.
Margarita abyssina Gabb.
Margaritella abbottii Gabb.
Xenophora leprosa Morton.
Endoptygma umbilicata Toumey.
Scalaria (Opallia) Thomasi ? Gabb.
Scalaria silliman sp. nov.
Scalaria hercules sp. nov.
Turritella compacta sp. nov.
Turritella encrinoides Morton.
Turritella ? granulicostata Gabb.
Turritella hardimanensis Gabb.
Turritella vertebroides Morton.
Turretella lippincotti.
Laxispira lumbricalis Gabb.
Siliquaria pauperata sp. nov.
Leiostraca cretacea Conrad.
Obeliscus conellus sp. nov.
Modulus lapidosa sp. nov.
Helcion ? tentorium Morton.
Actæon subovoides sp. nov.
Actæon gabbana sp. nov.
Actæon forbesiana sp. nov.
Actæon cretacea Gabb.
Globiconcha (Tylostoma) curta Gabb.
Cinulia (Oligoptycha) naticoides Gabb.
Cinulia ovoidea Gabb.
Avellana bullata Morton.
Cyclichna recta Gabb.
Bulla mortoni L. & E.
Dentalium subarcuatum Conrad.
Dentalium ripleyanum Gabb.
Dentalium (Falcula) falcatum Conrad.
Diploconcha (Serpula ?) cretacea ? Conrad.
Perissolax trivolva Gabb.
Volutoderma abbotti Gabb.
Natica abyssina Morton.
Lunatia halli Gabb.
Cavoscala gen. nov.
Cavoscala annulata Morton.
Pleurotomaria ? tintonensis sp. nov.
Pleurotrema gen. nov.
Pleurotrema solariformis sp. nov.
Caricella plicata sp. nov.
Rostellites biconicus sp. nov.
Volutoderma intermedia sp. nov.
Pleurotoma farmingdalensis sp. nov.
Rostellaria nobilis sp. nov.
Turritella pumila ? Gabb.
Pleutomaria brittoni sp. nov.
Bulla conica sp. nov.
Murex (Pteronotus) lævavaricosus sp. nov.
Murex ? sp. undet.
Rhinocantha (?) conradi sp. nov.
Triton eocenense sp. nov.
Pseudoliva vetusta ? Conrad.
Fusus angularis sp. nov.
Fusus pluricostatus sp. nov.
Fusus perobesus sp. nov.
Fusus paucicostatus sp. nov.
Fusus (Neptunea ?) staminea Conrad.
Fusus (Neptunea ?) eocenicus sp. nov.
Fusus (Neptunea ?) hector sp. nov.
Fusus (Neptunea ?) hector var. multilineatus var. nov.
Fusus (Urosalpinx) multicostatus sp. nov.
Clavella raphanoides Conrad.
Fasciolaria hercules sp. nov.
Fasciolaria propinqua sp. nov.
Fasciolaria samsoni sp. nov.
Caricella pyruloides (Conrad).
Caricella ponderosa sp. nov.
Voluta lelia sp. nov.
Voluta perelevata sp. nov.
Voluta sp. nov.
Voluta scaphoides sp. nov.
Voluta (Amoria) versta sp. nov.
Voluta (Scaphella) newcombiana Whitfield.
Volutilithes sayana Conrad.
Volutilithes cancellatus sp. nov.
Cancellaria rudis sp. nov.
Pleurotoma surculitiformis sp. nov.
Pleurotoma regularicostata sp. nov.
Pleurotoma (Surcula ?) altispira sp. nov.
Surcula perobesa sp. nov.

Whitfield, R. P.—Continued.

Surculites annosus Conrad.
Surculites cadaverosus sp. nov.
Surculites curtus sp. nov.
Conus subsaurideus Conrad.
Calyptraphorus velatus Conrad.
Cypræa sabuloviridis sp. nov.
Cassidaria carinata Lam.
Ficus penitus Conrad.
Natica globulella sp. nov.
Xenophora latiferens sp. nov.
Architectonica annosa.
Scalaria tennilirata sp. nov.
Mesalia elongata sp. nov.
Leptomaria (?) perlata Conrad.
Leptomaria gigantea sp. nov.
Leptomaria pergranulosa sp. nov.
Trematofusus gen. nov.
Trematofusus venustus.
Actæon prisca Conrad.
Tornatellæa lata Conrad.
Tornatina wetherelli Lea.
Nautilus dekayi Morton.
Nautilus bryani Gabb.
Hercoglossa paucifex Cope.
Ammonites complexus H. & M.
Ammonites dentato-carinatus Rœmer.
Ammonites delawarensis Morton.
Ammonites vanuxemi Morton.
Ammonites vanuxemi Morton.
Ammonites (Placenticeras) placenta Dekay.
Ammonites (Placenticeras) telifer Morton.
Ammonites (Sphenodiscus) lenticularis Owen.
Scaphites nodosus Owen.
Scaphites hippocrepis De Kay.
Scaphites reniformis Morton.
Scaphites iris Conrad.
Scaphites similis sp. nov.
Turrilites pauper sp. nov.
Heteroceras conradi Morton.
Ptychoceras (Solenoceras) annulifer Morton.
Baculites ovatus Say.
Baculites compressus Say.
Baculites asper Morton.
Belemnitella americana Morton.
Belemnites ? ambiguus Morton.
Nautilus cookana sp. nov.
Aturia vanuxemi Conrad.

Whitfield, R. P. Mastodon Remains on New York Island. (Science, Vol. XVIII, p. 342. New York, 1891.) Description of the occurrence of mastodon remains at Inwood and on Dychman Creek.

Whitfield, R. P. Observations on Fauna of the Rocks at Fort Cassin, Vermont, with Descriptions of New Species. (Bul. Am. Mus. Nat. Hist., Vol. III, pp. 26–29, 3 plates. New York, 1890.) Notes on the rocks are given, and the following species are described:

Tryblidium conicum Whitfield.
Ecculiomphalus triangulus sp. nov.
Euomphalus perkinsi sp. nov.
Helicotoma similis sp. nov.
Maclurea acuminata Billings.
Raphistoma hortensia Billings ?
Pleurotomaria difficilis sp. nov.
Orthoceras explorator Billings.
Orthoceras sordium Billings.
Orthoceras bilineatum Hall.
Bolbocephalus gen. nov.
Bolbocephalus ? truncatus sp. nov.
Bathyurus (Bathyurellus) glandicephalus sp. nov.

Whitfield, R. P. Observations on Fossil Fish from the Eocene beds of Wyoming. (Bul. American Mus. Nat. Hist., Vol. III, pp. 117–120, 1 plate. New York, 1890.) *Protocatostonus constablei* described as new.

Whitfield, R. P. Observations on Some Cretaceous Fossils from the Beyrut District of Syria in the Collection of the American Museum of Natural History, with Descriptions of Some New Species. (Bul. Am. Mus. Nat. Hist., Vol. III, No. 2, pp. 381–441, 7 plates. New York, 1891.) Descriptions of a number of Syrian species with a discussion of their stratigraphic position.

Whitfield, R. P. Observations on Some Imperfectly Known Fossils from the Calciferous Sandrock of Lake Champlain, and Descriptions of Several Forms.

Whitfield, R. P.—Continued.

(Bul. Am. Mus. Nat. Hist., Vol. II, No. 2, pp. 42–63, 7 plates. New York, 1889.) The following species are described and figured:

Orthis macleodi sp. nov.
Triplesia radiata sp. nov.
Metoptoma alta sp. nov.
Tryblidium? acutum sp. nov.
Triblidium pileolum sp. nov.
Ecculiomphalus priscus sp. nov.
Euomphalus calciferus sp. nov.
Ophileta complanata Vanuxem.
Maclurea sordida Hall.
Holopea turgida Hall.
Trochonema exilé sp. nov.
Raphistoma prævium sp. nov.
Pleurotomaria beekmanensis sp. nov.
Murchisonia gracilens sp. nov.
Murchisonia? confusa sp. nov.
Lophospira calcifera sp. nov.
Bucania tripla sp. nov.
Orthoceras primigenium Vanuxem.
Cyrtoceras kirbyi sp. nov.
Cyrtoceras beekmanensis sp. nov.
Cyrtoceras raei sp. nov.
Primitia gregaria sp. nov.
Primitia? cristata sp. nov.
Primitia seelyi sp. nov.
Bathyurus conicus Billings.
Bathyurus seelyi sp. nov.

Whitfield, R. P. Remarkable New Genus and Species of Brachiopod. (Trans. Amer. Inst. Mining Eng., Vol. XIX, pp. 104–107. New York, 1891.) *Scaphiocœlia boliviensis*, gen. et sp. nov., described as new from the Devonian of Bolivia. Reviewed in American Geologist, VIII, 397, 1891.

Williams, H. S. Correlation Papers: Devonian and Carboniferous. (Bul. U. S. Geol. Sur., No. 80, 279 pp. Washington, 1891.) Incidental references to the fossils.

Williams, H. S. Cuboides Zone and its Fauna: A discussion of Methods of Correlation. (Bul. Geol. Soc. America, Vol. I, pp. 481–500, 2 plates. New York, 1890.) A study of paleontological methods of correlation. The following species are figured:

Strophodonta mucronata Con.
Rhynchonella pugnus, var. alta Calvin.
Productus hallianus Walcott.
Chonetes logani var. aurora Hall.
Spirifer mucronatus var. tulliensis Williams.
Spirifer mucronatus Hall.
Platyceras symmetricum Hall.
Orthis tulliensis Vanuxem.
Atrypa cuboides Sowerby.
Atrypa impleta Sowerby.
Rhynchonella procuboides Kayser.
Terebratula cuboides Sowerby.
Rhynchonella venustula Hall.
Rhynchonella cuboides Sowerby.

Williams, H. S. Devonian System of North and South Devonshire. (Proc. Am. As. Adv. Sci., Vol. XXXVIII, pp. 233, 234. Salem, 1890.) Abstract of a discussion of the Devonian and the use of fossils in its correlation.

Williams, H. S. Devonian System of North and South Devonshire. (Am. Jour. Sci., (3), Vol. XXXIX, pp. 31–38. New Haven, 1890.) A study of the English Devonian with comparisons with the American series. Numerous references to fossils.

Williams, H. S. Different Types of the Devonian in North America. (Proc. Am. As. Adv. Sci., Vol. XXXVI, pp. 207, 208. Salem, 1888.) Abstract. Four separate types of the Devonian are recognized and their faunal characteristics considered.

Williams, H. S. Different Types of the Devonian System in North America. (Am. Jour. Sci., (3), Vol. XXXV, pp. 51–59. New Haven, 1888.) Incidental references to fossils from various localities.

Williams, H. S. Faunas of Upper Devonian Genesee Section of New York. (U. S. Geol. Sur., Bul. 41, 121 pp., 4 plates. Washington, 1888.) Numerous species of fossils mentioned.

Williams, H. S. Relation of the Devonian Faunas of Iowa. (American Geologist, Vol. III, pp. 230–233. Minneapolis, 1889.) Numerous references to the fossils.

Williams, H. S. Scope of Paleontology and its Value to Geologists. (American Geologist, Vol. x, pp. 148–169. Minneapolis, 1892.) Address before section E, A. A. A. S., August, 1892.

Williams, H. S. Use of Fossils in Determining the Age of Geologic Terranes. (Proc. Am. As. Adv. Sci., Vol. xxxvii, p. 206. Salem, 1889.) Abstract. A discussion of the value of fossils, with a formulation of rules.

Williams' Address on Scope of Paleontology and its Value to Geologists, Remarks. J. Marcou. (American Geologist, x, 257–260. 1892.)

Williston, S. W. Interesting Food Habit of the Plesosaurs. (Trans. Kansas Acad. Sci., Vol. xiii, pp. 121, 122. Topeka, 1893.) Description of stones found in the stomach and supposed to have been aided in the digestion.

Williston, S. W. Kansas Mosasaurs. (Science, Vol. xviii, p. 145. New York, 1891.)

Williston, S. W. Kansas Pterodactyls. (Kansas Univ. Quart., Vol. i, pp. 1–13. Lawrence, 1892.) An annotated list of eight species known to occur in Kansas, with descriptions of the genera Pteranodon and Nyctodactylus.

Williston, S. W. New Plesosaur from the Niobrara Cretaceous of Kansas. (Trans. Kansas Acad. Sci., Vol. xii, pp. 174–178. Topeka, 1890.) Description and diagnostic characters of *Cimoliosaurus* (*Elasmosaurus ?*) *snowii.*

Williston, S. W. Niobrara Cretaceous of Western Kansas. (Trans. Kansas Acad. Sci., Vol. xiii, pp. 107–111. Topeka, 1893.) Notes on various characteristic species.

Williston, S. W. Pelvis of Cumnoria (Camptosaurus). (American Naturalist, Vol. xxiv, pp. 472, 473. Philadelphia, 1890.) A correction on recent work by Lydekker.

Williston, S. W. Plesosaur from Niobrara Cretaceous of Kansas. (Trans. Kansas Acad. Sci., Vol. xii, pp. 1–5. Topeka, 1890.)

Williston, S. W. Skull and Hind Extremity of Pteranodon. (American Naturalist, Vol. xxv, pp. 1124–1126. Philadelphia, 1891.) A description of *Pteranodon longiceps* from the Cretaceous of Kansas.

Williston, S. W. Structure of the Kansas Chalk. (Trans. Kansas Acad. Sci., Vol. xii, p. 100. Topeka, 1890.) Notes the presence of Foraminifera, Radiolaria, sponges, etc., in the chalks of Kansas.

Williston, S. W. Structure of Plesiosaurian Skull. (Science, Vol. xvi, pp. 262–290. New York, 1890.) Reviewed in Neues Jahrbuch, 452, 1892.

Williston, H. S., and E. C. Case. Kansas Mosasaurs, Part i, Clidastes. (Kansas Univ. Quart., Vol. i, pp. 15–32, 4 plates. Lawrence, 1892.) A review of the Clidastes known from Kansas with descriptions of:

Clidastes velox Marsh.
Clidastes westii sp. nov.
Clidastes dispar Marsh.
Clidastes wymani Marsh.
Clidastes rex Marsh.
Clidastes stenops Cope.

Winchell, N. H. Discovery of Lingula and Paradoxides in the Red Quartzites of Minnesota. (Bul. Minnesota Acad. Nat. Sci., Vol. iii, pp. 103–105. Minneapolis, 1889.) Short note claiming that fossils have been found in the formation named.

Winchell, N. H., and Charles Schuchert. New Brachiopoda from the Trenton and Hudson River Groups of Minnesota. (American Geologist, Vol. ix, pp. 284–294. Minneapolis, 1892.) The following species described as new:

Lingula riciniformis var. galenensis.
Lingula (Glossina) deflecta.
Lingulasma galenensis.
Strophomena septata.
Strophomena planodorsata.
Strophomena schofieldi.
Strophomena emaciata.
Leptæna charlottæ.
Plectambonites gibbosa.
Orthis meedsi.
Hallina saffordi.
Hallina nicolleti.
Rhynchotrema inæquivalvis, var. laticostata.

Wind River Beds, Collection of 1891, Fossil Mammals. H. F. Osborn and J. L. Wortman. (Bul. Am. Mus. Nat. Hist., IV, 81–147. 1892.)

Winnipeg Basin, Orthoceratidæ of Trenton Limestone J. F. Whiteaves. (Trans. Roy. Soc. Canada, IX, Sec. IV, 77–90. 1891.)

Winnipegosis, Fossils from Devonian Rocks of the Islands, Shores, or Immediate Vicinity of Lake. J. F. Whiteaves. (Geol. and Nat. Hist. Sur. Canada, Contributions to Canadian Paleontology, I, 255–360. 1892.)

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Cambrian Fossils, Upper, Description of New Forms. C. D. Walcott. (Proc. U. S. Nat. Mus., XIII, 266–279. 1890.)

Cambrian Rocks of Virginia and Southern Appalachians. C. D. Walcott. (Am. Jour. Sci., (3), XLIV, 52–57. 1892.) Incidental references to certain Wisconsin fossils.

Check-List of Paleozoic Fossils of Wisconsin, Minnesota, Iowa, Dakota, and Nebraska. B. Bierbaur. (Bul. Minnesota Acad. Nat. Sci., III, No. 2, 206–247. 1888.)

Fishes, Paleozoic of North America. J. S. Newberry. (U. S. Geol. Sur., Mon. XVI, 340 pp. 1889.)

Lamellibranchiata, New. E. O. Ulrich. (American Geologist, X, 96–104. 1892.)

Lamellibranchiata, Silurian, Chiefly from Minnesota Rocks. E. O. Ulrich. (Geol. and Nat. Hist. Sur. Minnesota, Nineteenth Ann. Rep., 211–248. 1892.)

Ostracoda, Lower Silurian, No. I. E. O. Ulrich. (American Geologist, X, 263–270. 1892.)

Silurian Formations of Wisconsin and Minnesota Compared. F. W. Sardeson. (Bul. Minnesota Acad. Nat. Sci., III, 319–326. 1891.) Incidental references to fossils.

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Woodward, Anthony. Foraminifera from Post-Pliocene Sand at Santa Barbara., California. (New York Micros. Soc., Jour., Vol. V. pp. 24, 25. 1888.) List of specimens found.

Woodward, A. S. Evolution of Fins. (Natural Science, Vol. I, pp. 28–35. London, 1892.)

Woodward, Henry. Turrelepas in Utica Formation of Ottawa, Canada. (Geol. Mag., Vol. VI, pp. 271–275. London, 1889.) Reviewed in Neues Jahrbuch, 423, 1892.

Woodward, J. B. Erratic Cambrian Fossils in the Neocene Gravels of the Islands of Martha's Vineyard. (American Geologist, Vol. IX, pp. 243–247. Minneapolis, 1892.) A description of fossiliferous pebbles in the Neocene at Gay Head.

Woolman, Lewis. Geological Results of the Boring of an Artesian Well at Atlantic City, N. J. (Proc. Acad. Nat. Sci., Phila., Vol. XXXIX, pp. 339–342. Philadelphia, 1888.) Notes on the various Tertiary fossils found.

Woolman, Lewis. Geology of Artesian Wells at Atlantic City, N. J. (Proc. Acad. Nat. Sci., Philadelphia, Vol. XLII, pp. 132–147. Philadelphia, 1890.) List of fossils found in sinking the well is given.

Wooster, I. C. Permo-Carboniferous of Greenwood and Butler counties, Kans. (American Geologist, Vol. VI, pp. 9–18. Minneapolis, 1890.) List of fossils found given.

Worms.

Calciferous Formation in Champlain Valley. E. Brainard and H. M. Seely. (Bul. Geol. Soc. America, I, 501–516. 1890.) Incidental references to fossils.

Worms—Continued.

Cambrian Fossils from Cohasset, Mass. C. D. Walcott. (Proc. Bioc. Soc. Washington, VII, 155. 1890.)

Cambrian, Lower, or Olenellus, Zone of North America, Descriptive Notes of New Genera and Species. C. D. Walcott. (Proc. U. S. Nat. Mus., XII, 33–36. 1890.)

Devonian Rocks of Islands, Shores, or Immediate vicinity of Lakes Manitoba and Winnipegosis. J. F. Whiteaves. (Geol. and Nat. Hist. Sur. Canada, Contributions to Canadian Paleontology, I, 255–360. 1891.)

Devonian Rocks of Mackenzie River Basin. J. F. Whiteaves. (Geol. and Nat. Hist. Sur. Canada) Contributions to Canadian Paleontology, I, Part III, 199–253. 1891.)

Exploration in Yukon and Mackenzie Basins, N. W. T. R. G. McConnell. (Geol. and Nat. Hist. Sur. Canada, Ann. Rep. 1888–1889, IV, Part D, 163 pp. 1891.) Mention made of different species.

Fauna of Lower Cambrian or Olenellus Zone. C. D. Walcott. (U. S. Geol. Sur., Tenth Ann. Rep., 511–688. 1890.)

Fauna of St. Johns Group, No. V. G. F. Matthew. (Trans. Roy. Soc. Canada, VIII, Sec. IV, 123–166. 1890.)

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Genus Scolithus. (American Naturalist, XXVI, 240–242. 1892.)

Geological Section at Todd's Fork, Ohio. A. F. Foerste. (American Geologist, II, 412–419. 1888.) Occurrence of characteristic fossils noted.

Invertebrate Fossils of Pacific Coast. C. A. White. (Bul. U. S. Geol. Sur., No. 51. 1889.)

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Preliminary Description of North Attleborough Fossils. N. S. Shaler and A. F. Foerste. (Bul. Mus. Comp. Zool., No. 2, Geol. Ser. II, 27–41. 1888.)

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Relations between the Geology of Eastern Maine and New Brunswick. L. W. Bailey. (Trans. Roy. Soc. Canada, VII, Sec. IV, 57–68. 1889.) Allusions to various species of fossils.

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Scolithus, Studies in Problematic Organisms. J. F. James. (Bul. Geol. Soc. America, III, 32–44. 1892.)

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Wortman, J. L., H. F. Osborn and. Fossil Mammals of Wahsatch and Wind River Beds, Collection of 1891. (Bul. Am. Mus. Nat. Hist., Vol. IV, pp. 81–147. New York, 1892.) Several species described as new.

Worthen, A. H. Description of Fossil Invertebrates. (Geol. Sur. Illinois, Vol. VIII, pp. 71–154. Springfield, 1890.) The following species are described and figured:

Zaphrentis dalei Edwards and Haime.

Zaphrentis centralis Edw. and Haime.

Zaphrentis spinulosa Edw. and Haime.

Worthen, A. H.—Continued.

Zaphrentis chesterensis sp. nov.
Zaphrentis pellaensis sp. nov.
Zaphrentis calcariformis sp. nov.
Zaphrentis carinatus sp. nov.
Zaphrentis cliffordana Edw. and Haime.
Zaphrentis ulrichi sp. nov.
Zaphrentis lanceolatus sp. nov.
Zaphrentis illinoiensis sp. nov.
Zaphrentis spergenensis sp. nov.
Zaphrentis varsoviensis sp. nov.
Zaphrentis cylindracea sp. nov.
Zaphrentis reversa sp. nov.
Zaphrentis parasitica sp. nov.
Lophophyllum profundum sp. nov.
Anisophyllum ? iovaensis sp. nov.
Trachyopora austini sp. nov.
Amplexus geniculatus sp. nov.
Batocrinus montgomeryensis Worthen.
Batocrinus subconicus Worthen.
Batocrinus unionensis Worthen.
Batocrinus nashvillæ Troost.
Poteriocrinus elsahensis Worthen.
Poteriocrinus nodobasalis sp. nov.
Poteriocrinus buffalonensis sp. nov.
Poteriocrinus rowleyi sp. nov.
Poteriocrinus spinuliferus sp. nov.
Poteriocrinus mammæformis sp. nov.
Calceocrinus robustus sp. nov.
Calceocrinus tunicatus Hall.
Agaricocrinus macadamsi sp. nov.
Centrocrinus tennesseenis sp. nov.
Amphoracrinus jerseyensis sp. nov.
Actinocrinus lobatus Hall.
Eupachycrinus orbicularis Hall.
Eupachycrinus sancti-ludovici sp. nov.
Barycrinus spurius Hall.
Barycrinus tumidus Hall.
Dorycrinus mississippiensis Roemer.
Discina varsovensis Worthen.
Terebratula rowleyi Worthen.
Rynchonella illinoiensis Worthen.
Lingula varsoviensis Worthen.
Spirifera multigranosa sp. nov.
Orthis resupinoides Cox.
Leptodomus ? magnus Worthen.
Schizodus varsoviensis Worthen.
Schizodus depressus Worthen.
Schizodus ? circulus Worthen.
Schizodus ulrichi sp. nov.
Schizodus randolphensis sp. nov.
Pinna sancti-ludovici Worthen.
Conocardium parrishi sp. nov.
Aviculopecten orestes Worthen.
Aviculopecten niotensis Worthen.
Aviculopecten monroensis Worthen.
Aviculopecten talboti Worthen.
Aviculopecten elsahensis Worthen.
Aviculopecten chesterensis Worthen.
Aviculopecten spinuliferus Meek and Worthen.
Aviculopecten mazonensis sp. nov.
Aviculopecten mac-whorteri sp. nov.
Aviculopecten colletti Worthen.
Aviculopecten edwardsi Worthen.
Aviculopecten menardi Worthen.
Lima chesterensis sp. nov.
Edmondia varsoviensis Worthen.
Edmondia illinoisenis Worthen.
Clinopistha radiata Hall.
Macrodon sangamonensis sp. nov.
Pleurophorus chesterensis Worthen.
Pleurophorus minimus Worthen.
Pleurophorus monroensis Worthen.
Modiola illinoiensis Worthen.
Cardiomorpha ? pellensis Worthen.
Bakevellia illinoiensis Worthen
Myalina monroensis Worthen.
Nucula illinoiensis Worthen.
Aviculopinna illinoiensis Worthen.
Sanguinolites ? multistriatus Worthen.
Sanguinolites burlingtonensis Worthen.
Sanguinolites randolphensis Worthen.
Solenomya varsoviensis Worthen.
Solenomya monroensis Worthen.
Solenomya ? iowensis Worthen.
Allorisma illinoiensis Worthen.
Allorisma elongata Worthen.
Conularia chesterensis Worthen.
Pleurotomaria illinoiensis Worthen.
Pleurotomaria giffordi Worthen.
Pleurotomaria montezuma Worthen.
Pleurotomaria adamsi Worthen.
Pleurotomaria nauvooensis Worthen.
Pleurotomaria iowensis sp. nov.
Porcellia peoriensis Worthen.
Loxonema peoriense Worthen.
Loxonema quadricarinatum Worthen.

Worthen, A. H.—Continued.

Lepidopsis chesterensis Worthen.
Murchisonia keokuk sp. nov.
Murchisonia lasallensis sp. nov.
Straparollus subumbilicatus sp. nov.
Straparollus varsoviensis sp. nov.
Machrocheilus altonensis sp. nov.
Bellerophon giganteus Worthen.
Naticopsis madisonensis Worthen.
Polyphemopsis ? keokuk Worthen.
Dentalium illinoiense Worthen.
Orthonema carbonarium Worthen.
Trachydomia nodulosa Worthen.
Nautilus montgomeryensis Worthen.
Orthoceras illinoiense Worthen.
Orthoceras okawense Worthen.
Orthoceras lasallense Worthen.
Goniatites monroensis sp. nov.
Solenocheilus indianense sp. nov.
Temnocheilus scottense sp. nov.
Ascoceras southwelli sp. nov.
Colpocaris chesterensis Worthen.
Solenocaris sancti-ludovici Worthen.

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